

## SEQUENCE LISTING

- <110> Genentech, Inc.  
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- <120> Secreted and Transmembrane Polypeptides and Nucleic  
Acids Encoding the Same
- <130> 10466-14
- <140> 09/665,350  
<141> 2000-09-18
- <150> PCT/US00/04414  
<151> 2000-02-22
- <150> US 60/143,048  
<151> 1999-07-07
- <150> US 60/145,698  
<151> 1999-07-26
- <150> US 60/146,222  
<151> 1999-07-28
- <150> PCT/US99/20594  
<151> 1999-09-08
- <150> PCT/US99/20944  
<151> 1999-09-13

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| cccgcagcgc  | taccgcccat | gcgcctgccg | cgccggggccg | cgctggggct | cctgccgctt  | 180 |
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| cgggggctgg  | tggacaagtt | taaccagggg | atggtggaca  | ccgcaaagaa | gaactttggc  | 300 |
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| ttattcgagt  | ggttttgtgt | gaagacactg | aaagtgtgct  | gctctccagg | aacctacggg  | 540 |
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<210> 2

<211> 353

<212> PRT

<213> Homo sapiens

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Leu Leu Pro Pro Ala Pro Glu Ala Ala Lys Lys Pro Thr Pro Cys His
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```

```

Arg Cys Arg Gly Leu Val Asp Lys Phe Asn Gln Gly Met Val Asp Thr
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```

```

Ala Lys Lys Asn Phe Gly Gly Gly Asn Thr Ala Trp Glu Glu Lys Thr
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Leu Ser Lys Tyr Glu Ser Ser Glu Ile Arg Leu Leu Glu Ile Leu Glu
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```

Gly Leu Cys Glu Ser Ser Asp Phe Glu Cys Asn Gln Met Leu Glu Ala
      85              90              95

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Gln Glu Glu His Leu Glu Ala Trp Trp Leu Gln Leu Lys Ser Glu Tyr
      100             105             110

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Pro Asp Leu Phe Glu Trp Phe Cys Val Lys Thr Leu Lys Val Cys Cys
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<210> 3
<211> 2206
<212> DNA
<213> Homo sapiens
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| tgcacctcga | cccacgcgctc | cgccaggccg | ggaggcgacg | cgcccagccg | tctaaacggg | 120 |  |
| aacagccctg | gctcagggag  | ctgcagcgca | gcagagtatc | tgacggcgcc | aggttgcgta | 180 |  |
| ggtgcggcac | gaggagtttt  | cccggcagcg | aggaggtcct | gagcagcatg | gcccggagga | 240 |  |



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<210> 4

<211> 379

<212> PRT

<213> Homo sapiens

<400> 4

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Ile Leu Leu Cys Leu Leu Ala Leu Arg Ala Glu Ala Gly Pro Pro Gln  
 20 25 30

Glu Glu Ser Leu Tyr Leu Trp Ile Asp Ala His Gln Ala Arg Val Leu  
 35 40 45

Ile Gly Phe Glu Glu Asp Ile Leu Ile Val Ser Glu Gly Lys Met Ala  
 50 55 60

Pro Phe Thr His Asp Phe Arg Lys Ala Gln Gln Arg Met Pro Ala Ile

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| 65  |  | 70  |  | 75  |  | 80  |
| Pro Val Asn Ile His Ser Met Asn Phe Thr Trp Gln Ala Ala Gly Gln |  |     |  |     |  |     |
|   |  | 85  |  | 90  |  | 95  |
| Ala Glu Tyr Phe Tyr Glu Phe Leu Ser Leu Arg Ser Leu Asp Lys Gly |  |     |  |     |  |     |
|   |  | 100 |  | 105 |  | 110 |
| Ile Met Ala Asp Pro Thr Val Asn Val Pro Leu Leu Gly Thr Val Pro |  |     |  |     |  |     |
|   |  | 115 |  | 120 |  | 125 |
| His Lys Ala Ser Val Val Gln Val Gly Phe Pro Cys Leu Gly Lys Gln |  |     |  |     |  |     |
|   |  | 130 |  | 135 |  | 140 |
| Asp Gly Val Ala Ala Phe Glu Val Asp Val Ile Val Met Asn Ser Glu |  |     |  |     |  |     |
|   |  | 145 |  | 150 |  | 155 |
|   |  |     |  | 155 |  | 160 |
| Gly Asn Thr Ile Leu Gln Thr Pro Gln Asn Ala Ile Phe Phe Lys Thr |  |     |  |     |  |     |
|   |  | 165 |  | 170 |  | 175 |
| Cys Gln Gln Ala Glu Cys Pro Gly Gly Cys Arg Asn Gly Gly Phe Cys |  |     |  |     |  |     |
|   |  | 180 |  | 185 |  | 190 |
| Asn Glu Arg Arg Ile Cys Glu Cys Pro Asp Gly Phe His Gly Pro His |  |     |  |     |  |     |
|   |  | 195 |  | 200 |  | 205 |
| Cys Glu Lys Ala Leu Cys Thr Pro Arg Cys Met Asn Gly Gly Leu Cys |  |     |  |     |  |     |
|   |  | 210 |  | 215 |  | 220 |
| Val Thr Pro Gly Phe Cys Ile Cys Pro Pro Gly Phe Tyr Gly Val Asn |  |     |  |     |  |     |
|   |  | 225 |  | 230 |  | 235 |
|   |  |     |  | 235 |  | 240 |
| Cys Asp Lys Ala Asn Cys Ser Thr Thr Cys Phe Asn Gly Gly Thr Cys |  |     |  |     |  |     |
|   |  | 245 |  | 250 |  | 255 |
| Phe Tyr Pro Gly Lys Cys Ile Cys Pro Pro Gly Leu Glu Gly Glu Gln |  |     |  |     |  |     |
|   |  | 260 |  | 265 |  | 270 |
| Cys Glu Ile Ser Lys Cys Pro Gln Pro Cys Arg Asn Gly Gly Lys Cys |  |     |  |     |  |     |
|   |  | 275 |  | 280 |  | 285 |
| Ile Gly Lys Ser Lys Cys Lys Cys Ser Lys Gly Tyr Gln Gly Asp Leu |  |     |  |     |  |     |
|   |  | 290 |  | 295 |  | 300 |
| Cys Ser Lys Pro Val Cys Glu Pro Gly Cys Gly Ala His Gly Thr Cys |  |     |  |     |  |     |
|   |  | 305 |  | 310 |  | 315 |
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| His Glu Pro Asn Lys Cys Gln Cys Gln Glu Gly Trp His Gly Arg His |  |     |  |     |  |     |
|   |  | 325 |  | 330 |  | 335 |
| Cys Asn Lys Arg Tyr Glu Ala Ser Leu Ile His Ala Leu Arg Pro Ala |  |     |  |     |  |     |
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<210> 9  
 <211> 22  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
 oligonucleotide probe

<400> 9  
 aaagacgcat ctgcgagtgt cc 22

<210> 10  
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 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
 oligonucleotide probe

<400> 10  
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<210> 11  
 <211> 2197  
 <212> DNA  
 <213> Homo sapiens

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<210> 12

<211> 164

<212> PRT

<213> Homo sapiens

<400> 12

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 20 25 30  
 Pro Gly Leu His Leu Arg Gly Ile Arg Asp Ala Gly Gly Arg Tyr Cys  
 35 40 45  
 Gln Glu Gln Asp Leu Cys Cys Arg Gly Arg Ala Asp Asp Cys Ala Leu  
 50 55 60  
 Pro Tyr Leu Gly Ala Ile Cys Tyr Cys Asp Leu Phe Cys Asn Arg Thr  
 65 70 75 80  
 Val Ser Asp Cys Cys Pro Asp Phe Trp Asp Phe Cys Leu Gly Val Pro  
 85 90 95  
 Pro Pro Phe Pro Pro Ile Gln Gly Cys Met His Gly Gly Arg Ile Tyr  
 100 105 110  
 Pro Val Leu Gly Thr Tyr Trp Asp Asn Cys Asn Arg Cys Thr Cys Gln  
 115 120 125  
 Glu Asn Arg Gln Trp His Gly Gly Ser Arg His Asp Gln Ser His Gln  
 130 135 140  
 Pro Gly Gln Leu Trp Leu Ala Gly Trp Glu Pro Gln Arg Leu Leu Gly  
 145 150 155 160  
 His Asp Pro Gly

0905056-071204

<210> 13  
 <211> 533  
 <212> DNA  
 <213> Homo sapiens

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 <222> (33)  
 <223> a, t, c or g

<220>  
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 <222> (80)  
 <223> a, t, c or g

<220>  
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 <223> a, t, c or g

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 <223> a, t, c or g

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<210> 14  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
 oligonucleotide probe

<400> 14

ttcgaggcct ctgagaagtg gccc 24

<210> 15

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
oligonucleotide probe

<400> 15

ggcggatatct ctctggcctc cc 22

<210> 16

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
oligonucleotide probe

<400> 16

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<210> 17

<211> 960

<212> DNA

<213> Homo sapiens

<400> 17

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ccgtggtgtc ccccgaccc agcaggggac aggcactcag gagggcccag taaaggctga 780  
gatgaagtgg actgagtaga actggaggac aagagtcgac gtgagttcct gggagtctcc 840  
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<210> 18

<211> 189

<212> PRT

<213> Homo sapiens

&lt;400&gt; 18

Met Thr His Arg Thr Thr Thr Trp Ala Arg Arg Thr Ser Arg Ala Val  
 1 5 10 15

Thr Pro Thr Cys Ala Thr Pro Ala Gly Pro Met Pro Cys Ser Arg Leu  
 20 25 30

Pro Pro Ser Leu Arg Cys Ser Leu His Ser Ala Cys Cys Ser Gly Asp  
 35 40 45

Pro Ala Ser Tyr Arg Leu Trp Gly Ala Pro Leu Gln Pro Thr Leu Gly  
 50 55 60

Val Val Pro Gln Ala Ser Val Pro Leu Leu Thr Asp Leu Ala Gln Trp  
 65 70 75 80

Glu Pro Val Leu Val Pro Glu Ala His Pro Asn Ala Ser Leu Thr Met  
 85 90 95

Tyr Val Cys Thr Pro Val Pro His Pro Asp Pro Pro Met Ala Leu Ser  
 100 105 110

Arg Thr Pro Thr Arg Gln Ile Ser Ser Ser Asp Thr Asp Pro Pro Ala  
 115 120 125

Asp Gly Pro Ser Asn Pro Leu Cys Cys Cys Phe His Gly Pro Ala Phe  
 130 135 140

Ser Thr Leu Asn Pro Val Leu Arg His Leu Phe Pro Gln Glu Ala Phe  
 145 150 155 160

Pro Ala His Pro Ile Tyr Asp Leu Ser Gln Val Trp Ser Val Val Ser  
 165 170 175

Pro Ala Pro Ser Arg Gly Gln Ala Leu Arg Arg Ala Gln  
 180 185

&lt;210&gt; 19

&lt;211&gt; 24

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: Synthetic  
 oligonucleotide probe

&lt;400&gt; 19

tgctgtgcta ctctgcaaa gccc

24

&lt;210&gt; 20

&lt;211&gt; 24

&lt;212&gt; DNA



<213> Homo sapiens

&lt;400&gt; 23

Met Gly Ala Ala Arg Leu Leu Pro Asn Leu Thr Leu Cys Leu Gln Leu  
 1 5 10 15

Leu Ile Leu Cys Cys Gln Thr Gln Tyr Val Arg Asp Gln Gly Ala Met  
 20 25 30

Thr Asp Gln Leu Ser Arg Arg Gln Ile Arg Glu Tyr Gln Leu Tyr Ser  
 35 40 45

Arg Thr Ser Gly Lys His Val Gln Val Thr Gly Arg Arg Ile Ser Ala  
 50 55 60

Thr Ala Glu Asp Gly Asn Lys Phe Ala Lys Leu Ile Val Glu Thr Asp  
 65 70 75 80

Thr Phe Gly Ser Arg Val Arg Ile Lys Gly Ala Glu Ser Glu Lys Tyr  
 85 90 95

Ile Cys Met Asn Lys Arg Gly Lys Leu Ile Gly Lys Pro Ser Gly Lys  
 100 105 110

Ser Lys Asp Cys Val Phe Thr Glu Ile Val Leu Glu Asn Asn Tyr Thr  
 115 120 125

Ala Phe Gln Asn Ala Arg His Glu Gly Trp Phe Met Ala Phe Thr Arg  
 130 135 140

Gln Gly Arg Pro Arg Gln Ala Ser Arg Ser Arg Gln Asn Gln Arg Glu  
 145 150 155 160

Ala His Phe Ile Lys Arg Leu Tyr Gln Gly Gln Leu Pro Phe Pro Asn  
 165 170 175

His Ala Glu Lys Gln Lys Gln Phe Glu Phe Val Gly Ser Ala Pro Thr  
 180 185 190

Arg Arg Thr Lys Arg Thr Arg Arg Pro Gln Pro Leu Thr  
 195 200 205

&lt;210&gt; 24

&lt;211&gt; 28

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: Synthetic  
 oligonucleotide probe

&lt;400&gt; 24

cagtacgtga gggaccaggg cgccatga

28

&lt;210&gt; 25

T02720"95050560

<211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
 oligonucleotide probe

<400> 25  
 ccggtgacct gcacgtgctt gccca

24

<210> 26  
 <211> 41  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
 oligonucleotide probe

<220>  
 <221> modified\_base  
 <222> (21)  
 <223> a, t, c or g

<400> 26  
 gcggatctgc cgctgctca nctggctcgg catggcgccc t

41

<210> 27  
 <211> 2479  
 <212> DNA  
 <213> Homo sapiens

<400> 27  
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 aggacagcag caaagagggc aacacaggct gataagacca gagacagcag ggagattatt 120  
 ttaccatacg ccctcaggac gttccctcta gctggagtgc tggacttcaa cagaacccca 180  
 tccagtcatt ttgattttgc tgtttatttt ttttttcttt ttctttttcc caccacattg 240  
 tattttattt ccgtacttca gaaatgggcc tacagaccac aaagtggccc agccatgggg 300  
 cttttttcct gaagtcttgg cttatcattt ccctggggct ctactcacag gtgtccaaac 360  
 tcctggcctg ccctagtgtg tgccgctgcg acaggaactt tgtctactgt aatgagcgaa 420  
 gcttgacctc agtgccctct gggatcccg agggcgtaac cgtactctac ctccacaaca 480  
 accaaattaa taatgctgga tttcctgcag aactgcacaa tgtacagtgc gtgcacacgg 540  
 tctacctgta tggcaaccaa ctggacgaat tccccatgaa ctttcccaag aatgtcagag 600  
 ttctccattt gcaggaaaac aatattcaga ccatttcacg ggctgctctt gccagctct 660  
 tgaagcttga agagctgcac ctggatgaca actccatata cacagtgggg gtggaagacg 720  
 gggccttcgg ggaggctatt agcctcaaat tgttgttttt gtctaagaat cacctgagca 780  
 gtgtgcctgt tgggcttctt gtggacttgc aagagctgag agtggatgaa aatcgaattg 840  
 ctgtcatatc cgacatggcc ttccagaatc tcacgagctt ggagcgtctt attgtggacg 900  
 ggaacctcct gaccaacaag ggtatcgccg agggcacctt cagccatctc accaagctca 960  
 aggaattttc aattgtacgt aattcgctgt cccaccctcc tcccgatctc ccaggtaacg 1020  
 atctgatcag gctctatttg caggacaacc agataaacca cattcctttg acagccttct 1080  
 caaatctgcg taagctggaa cggctggata tatccaacaa ccaactgcgg atgctgactc 1140

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<210> 28
<211> 660
<212> PRT
<213> Homo sapiens

<400> 28
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Lys Ser Trp Leu Ile Ile Ser Leu Gly Leu Tyr Ser Gln Val Ser Lys
                20                25                30

Leu Leu Ala Cys Pro Ser Val Cys Arg Cys Asp Arg Asn Phe Val Tyr
                35                40                45

Cys Asn Glu Arg Ser Leu Thr Ser Val Pro Leu Gly Ile Pro Glu Gly
  50                55                60

Val Thr Val Leu Tyr Leu His Asn Asn Gln Ile Asn Asn Ala Gly Phe
  65                70                75                80

Pro Ala Glu Leu His Asn Val Gln Ser Val His Thr Val Tyr Leu Tyr
                85                90                95

Gly Asn Gln Leu Asp Glu Phe Pro Met Asn Leu Pro Lys Asn Val Arg
                100                105                110

Val Leu His Leu Gln Glu Asn Asn Ile Gln Thr Ile Ser Arg Ala Ala
  115                120                125

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|            |     |     |     |     |     |     |     |     |     |     |     |     |     |     |            |
|------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------------|
| Leu<br>130 | Ala | Gln | Leu | Leu | Lys | Leu | Glu | Glu | Leu | His | Leu | Asp | Asp | Asn | Ser        |
| Ile<br>145 | Ser | Thr | Val | Gly | Val | Glu | Asp | Gly | Ala | Phe | Arg | Glu | Ala | Ile | Ser<br>160 |
| Leu        | Lys | Leu | Leu | Phe | Leu | Ser | Lys | Asn | His | Leu | Ser | Ser | Val | Pro | Val        |
| Gly        | Leu | Pro | Val | Asp | Leu | Gln | Glu | Leu | Arg | Val | Asp | Glu | Asn | Arg | Ile        |
| Ala        | Val | Ile | Ser | Asp | Met | Ala | Phe | Gln | Asn | Leu | Thr | Ser | Leu | Glu | Arg        |
| Leu        | Ile | Val | Asp | Gly | Asn | Leu | Leu | Thr | Asn | Lys | Gly | Ile | Ala | Glu | Gly        |
| Thr        | Phe | Ser | His | Leu | Thr | Lys | Leu | Lys | Glu | Phe | Ser | Ile | Val | Arg | Asn        |
| Ser        | Leu | Ser | His | Pro | Pro | Pro | Asp | Leu | Pro | Gly | Thr | His | Leu | Ile | Arg        |
| Leu        | Tyr | Leu | Gln | Asp | Asn | Gln | Ile | Asn | His | Ile | Pro | Leu | Thr | Ala | Phe        |
| Ser        | Asn | Leu | Arg | Lys | Leu | Glu | Arg | Leu | Asp | Ile | Ser | Asn | Asn | Gln | Leu        |
| Arg        | Met | Leu | Thr | Gln | Gly | Val | Phe | Asp | Asn | Leu | Ser | Asn | Leu | Lys | Gln        |
| Leu        | Thr | Ala | Arg | Asn | Asn | Pro | Trp | Phe | Cys | Asp | Cys | Ser | Ile | Lys | Trp        |
| Val        | Thr | Glu | Trp | Leu | Lys | Tyr | Ile | Pro | Ser | Ser | Leu | Asn | Val | Arg | Gly        |
| Phe        | Met | Cys | Gln | Gly | Pro | Glu | Gln | Val | Arg | Gly | Met | Ala | Val | Arg | Glu        |
| Leu        | Asn | Met | Asn | Leu | Leu | Ser | Cys | Pro | Thr | Thr | Thr | Pro | Gly | Leu | Pro        |
| Leu        | Phe | Thr | Pro | Ala | Pro | Ser | Thr | Ala | Ser | Pro | Thr | Thr | Gln | Pro | Pro        |
| Thr        | Leu | Ser | Ile | Pro | Asn | Pro | Ser | Arg | Ser | Tyr | Thr | Pro | Pro | Thr | Pro        |
| Thr        | Thr | Ser | Lys | Leu | Pro | Thr | Ile | Pro | Asp | Trp | Asp | Gly | Arg | Glu | Arg        |

|       |     |
|-------|-----|
| <210> | 29  |
| <211> | 21  |
| <212> | DNA |

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gaggaagacc cgggtggctg cgeccctgcc tcgcttccca ggcgcggcg gctgcagcct 180  
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 tcggacagat cgtcctcctc cctgccgagg ccagggagcg gtcacgtggg aggtccatct 300  
 ctaggggag acacgctcgg acccaccgc agacggccct tctggagagt tcctgtgaga 360  
 acaagcgggc agacctggtt ttcattcattg acagctctcg cagtgtcaac acccatgact 420  
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<210> 34

<211> 915

<212> PRT

<213> Homo sapiens

<400> 34

Met Glu Lys Met Leu Ala Gly Cys Phe Leu Leu Ile Leu Gly Gln Ile  
 1 5 10 15

Val Leu Leu Pro Ala Glu Ala Arg Glu Arg Ser Arg Gly Arg Ser Ile  
 20 25 30

Ser Arg Gly Arg His Ala Arg Thr His Pro Gln Thr Ala Leu Leu Glu  
 35 40 45

Ser Ser Cys Glu Asn Lys Arg Ala Asp Leu Val Phe Ile Ile Asp Ser  
 50 55 60

Ser Arg Ser Val Asn Thr His Asp Tyr Ala Lys Val Lys Glu Phe Ile  
 65 70 75 80

Val Asp Ile Leu Gln Phe Leu Asp Ile Gly Pro Asp Val Thr Arg Val  
 85 90 95

Gly Leu Leu Gln Tyr Gly Ser Thr Val Lys Asn Glu Phe Ser Leu Lys  
 100 105 110

Thr Phe Lys Arg Lys Ser Glu Val Glu Arg Ala Val Lys Arg Met Arg  
 115 120 125

His Leu Ser Thr Gly Thr Met Thr Gly Leu Ala Ile Gln Tyr Ala Leu  
 130 135 140

Asn Ile Ala Phe Ser Glu Ala Glu Gly Ala Arg Pro Leu Arg Glu Asn  
 145 150 155 160

Val Pro Arg Val Ile Met Ile Val Thr Asp Gly Arg Pro Gln Asp Ser  
 165 170 175

Val Ala Glu Val Ala Ala Lys Ala Arg Asp Thr Gly Ile Leu Ile Phe  
 180 185 190

Ala Ile Gly Val Gly Gln Val Asp Phe Asn Thr Leu Lys Ser Ile Gly  
 195 200 205

Ser Glu Pro His Glu Asp His Val Phe Leu Val Ala Asn Phe Ser Gln  
 210 215 220

Ile Glu Thr Leu Thr Ser Val Phe Gln Lys Lys Leu Cys Thr Ala His

0505056-071304

|                 |   |     |     |     |     |     |
|-----------------|---|-----|-----|-----|-----|-----|
| 225             |   | 230 |     | 235 |     | 240 |
| Met Cys Ser Thr | Leu Glu His Asn Cys Ala His Phe Cys Ile Asn Ile |     |     |     |     |     |
|                 | 245   |     | 250 |     |     | 255 |
| Pro Gly Ser Tyr | Val Cys Arg Cys Lys Gln Gly Tyr Ile Leu Asn Ser |     |     |     |     |     |
|                 | 260   |     | 265 |     |     | 270 |
| Asp Gln Thr Thr | Cys Arg Ile Gln Asp Leu Cys Ala Met Glu Asp His |     |     |     |     |     |
|                 | 275   |     | 280 |     |     | 285 |
| Asn Cys Glu Gln | Leu Cys Val Asn Val Pro Gly Ser Phe Val Cys Gln |     |     |     |     |     |
|                 | 290   |     | 295 |     |     | 300 |
| Cys Tyr Ser Gly | Tyr Ala Leu Ala Glu Asp Gly Lys Arg Cys Val Ala |     |     |     |     |     |
|                 | 305   |     | 310 |     | 315 | 320 |
| Val Asp Tyr Cys | Ala Ser Glu Asn His Gly Cys Glu His Glu Cys Val |     |     |     |     |     |
|                 | 325   |     | 330 |     |     | 335 |
| Asn Ala Asp Gly | Ser Tyr Leu Cys Gln Cys His Glu Gly Phe Ala Leu |     |     |     |     |     |
|                 | 340   |     | 345 |     |     | 350 |
| Asn Pro Asp Glu | Lys Thr Cys Thr Arg Ile Asn Tyr Cys Ala Leu Asn |     |     |     |     |     |
|                 | 355   |     | 360 |     |     | 365 |
| Lys Pro Gly Cys | Glu His Glu Cys Val Asn Met Glu Glu Ser Tyr Tyr |     |     |     |     |     |
|                 | 370   |     | 375 |     |     | 380 |
| Cys Arg Cys His | Arg Gly Tyr Thr Leu Asp Pro Asn Gly Lys Thr Cys |     |     |     |     |     |
|                 | 385   |     | 390 |     | 395 | 400 |
| Ser Arg Val Asp | His Cys Ala Gln Gln Asp His Gly Cys Glu Gln Leu |     |     |     |     |     |
|                 | 405   |     | 410 |     |     | 415 |
| Cys Leu Asn Thr | Glu Asp Ser Phe Val Cys Gln Cys Ser Glu Gly Phe |     |     |     |     |     |
|                 | 420   |     | 425 |     |     | 430 |
| Leu Ile Asn Glu | Asp Leu Lys Thr Cys Ser Arg Val Asp Tyr Cys Leu |     |     |     |     |     |
|                 | 435   |     | 440 |     |     | 445 |
| Leu Ser Asp His | Gly Cys Glu Tyr Ser Cys Val Asn Met Asp Arg Ser |     |     |     |     |     |
|                 | 450   |     | 455 |     |     | 460 |
| Phe Ala Cys Gln | Cys Pro Glu Gly His Val Leu Arg Ser Asp Gly Lys |     |     |     |     |     |
|                 | 465   |     | 470 |     | 475 | 480 |
| Thr Cys Ala Lys | Leu Asp Ser Cys Ala Leu Gly Asp His Gly Cys Glu |     |     |     |     |     |
|                 | 485   |     | 490 |     |     | 495 |
| His Ser Cys Val | Ser Ser Glu Asp Ser Phe Val Cys Gln Cys Phe Glu |     |     |     |     |     |
|                 | 500   |     | 505 |     |     | 510 |

09505055-071001

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Tyr | Ile | Leu | Arg | Glu | Asp | Gly | Lys | Thr | Cys | Arg | Arg | Lys | Asp | Val |
|     |     | 515 |     |     |     |     | 520 |     |     |     |     | 525 |     |     |     |
| Cys | Gln | Ala | Ile | Asp | His | Gly | Cys | Glu | His | Ile | Cys | Val | Asn | Ser | Asp |
|     |     | 530 |     |     |     | 535 |     |     |     |     | 540 |     |     |     |     |
| Asp | Ser | Tyr | Thr | Cys | Glu | Cys | Leu | Glu | Gly | Phe | Arg | Leu | Ala | Glu | Asp |
| 545 |     |     |     |     | 550 |     |     |     |     | 555 |     |     |     |     | 560 |
| Gly | Lys | Arg | Cys | Arg | Arg | Lys | Asp | Val | Cys | Lys | Ser | Thr | His | His | Gly |
|     |     |     |     | 565 |     |     |     |     | 570 |     |     |     |     | 575 |     |
| Cys | Glu | His | Ile | Cys | Val | Asn | Asn | Gly | Asn | Ser | Tyr | Ile | Cys | Lys | Cys |
|     |     |     | 580 |     |     |     |     | 585 |     |     |     |     | 590 |     |     |
| Ser | Glu | Gly | Phe | Val | Leu | Ala | Glu | Asp | Gly | Arg | Arg | Cys | Lys | Lys | Cys |
|     |     |     | 595 |     |     |     | 600 |     |     |     |     | 605 |     |     |     |
| Thr | Glu | Gly | Pro | Ile | Asp | Leu | Val | Phe | Val | Ile | Asp | Gly | Ser | Lys | Ser |
|     |     |     |     |     |     | 615 |     |     |     |     | 620 |     |     |     |     |
| Leu | Gly | Glu | Glu | Asn | Phe | Glu | Val | Val | Lys | Gln | Phe | Val | Thr | Gly | Ile |
| 625 |     |     |     |     | 630 |     |     |     |     | 635 |     |     |     |     | 640 |
| Ile | Asp | Ser | Leu | Thr | Ile | Ser | Pro | Lys | Ala | Ala | Arg | Val | Gly | Leu | Leu |
|     |     |     |     | 645 |     |     |     |     | 650 |     |     |     |     | 655 |     |
| Gln | Tyr | Ser | Thr | Gln | Val | His | Thr | Glu | Phe | Thr | Leu | Arg | Asn | Phe | Asn |
|     |     |     | 660 |     |     |     |     | 665 |     |     |     |     | 670 |     |     |
| Ser | Ala | Lys | Asp | Met | Lys | Lys | Ala | Val | Ala | His | Met | Lys | Tyr | Met | Gly |
|     |     | 675 |     |     |     |     | 680 |     |     |     |     | 685 |     |     |     |
| Lys | Gly | Ser | Met | Thr | Gly | Leu | Ala | Leu | Lys | His | Met | Phe | Glu | Arg | Ser |
|     |     |     |     |     |     | 695 |     |     |     |     | 700 |     |     |     |     |
| Phe | Thr | Gln | Gly | Glu | Gly | Ala | Arg | Pro | Leu | Ser | Thr | Arg | Val | Pro | Arg |
| 705 |     |     |     |     | 710 |     |     |     |     | 715 |     |     |     |     | 720 |
| Ala | Ala | Ile | Val | Phe | Thr | Asp | Gly | Arg | Ala | Gln | Asp | Asp | Val | Ser | Glu |
|     |     |     |     | 725 |     |     |     |     | 730 |     |     |     |     | 735 |     |
| Trp | Ala | Ser | Lys | Ala | Lys | Ala | Asn | Gly | Ile | Thr | Met | Tyr | Ala | Val | Gly |
|     |     |     | 740 |     |     |     |     | 745 |     |     |     |     | 750 |     |     |
| Val | Gly | Lys | Ala | Ile | Glu | Glu | Glu | Leu | Gln | Glu | Ile | Ala | Ser | Glu | Pro |
|     |     |     | 755 |     |     |     | 760 |     |     |     |     | 765 |     |     |     |
| Thr | Asn | Lys | His | Leu | Phe | Tyr | Ala | Glu | Asp | Phe | Ser | Thr | Met | Asp | Glu |
|     |     |     |     |     |     | 775 |     |     |     |     | 780 |     |     |     |     |
| Ile | Ser | Glu | Lys | Leu | Lys | Lys | Gly | Ile | Cys | Glu | Ala | Leu | Glu | Asp | Ser |
| 785 |     |     |     |     | 790 |     |     |     |     | 795 |     |     |     |     | 800 |

Asp Gly Arg Gln Asp Ser Pro Ala Gly Glu Leu Pro Lys Thr Val Gln  
805 810 815

Gln Pro Thr Glu Ser Glu Pro Val Thr Ile Asn Ile Gln Asp Leu Leu  
820 825 830

Ser Cys Ser Asn Phe Ala Val Gln His Arg Tyr Leu Phe Glu Glu Asp  
835 840 845

Asn Leu Leu Arg Ser Thr Gln Lys Leu Ser His Ser Thr Lys Pro Ser  
850 855 860

Gly Ser Pro Leu Glu Glu Lys His Asp Gln Cys Lys Cys Glu Asn Leu  
865 870 875 880

Ile Met Phe Gln Asn Leu Ala Asn Glu Glu Val Arg Lys Leu Thr Gln  
885 890 895

Arg Leu Glu Glu Met Thr Gln Arg Met Glu Ala Leu Glu Asn Arg Leu  
900 905 910

Arg Tyr Arg  
915

<210> 35

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
oligonucleotide probe

<400> 35

gtgaccctgg ttgtgaatac tcc

23

<210> 36

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
oligonucleotide probe

<400> 36

acagccatgg tctatagctt gg

22

<210> 37

<211> 45

<212> DNA

<213> Artificial Sequence

0505056 074204

&lt;220&gt;

<223> Description of Artificial Sequence: Synthetic  
oligonucleotide probe

&lt;400&gt; 37

gcctgtcagt gtcctgaggg acacgtgctc cgcagcgatg ggaag

45

&lt;210&gt; 38

&lt;211&gt; 1813

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 38

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tttgtatgaa aaa 1813

```

&lt;210&gt; 39

&lt;211&gt; 390

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 39

Met Ile Ser Leu Pro Gly Pro Leu Val Thr Asn Leu Leu Arg Phe Leu

| 1   | 5   | 10  | 15  |
|---|-----|-----|-----|
| Phe Leu Gly Leu Ser Ala Leu Ala Pro Pro Ser Arg Ala Gln Leu Gln | 20  | 25  | 30  |
| Leu His Leu Pro Ala Asn Arg Leu Gln Ala Val Glu Gly Gly Glu Val | 35  | 40  | 45  |
| Val Leu Pro Ala Trp Tyr Thr Leu His Gly Glu Val Ser Ser Ser Gln | 50  | 55  | 60  |
| Pro Trp Glu Val Pro Phe Val Met Trp Phe Phe Lys Gln Lys Glu Lys | 65  | 70  | 75  |
| Glu Asp Gln Val Leu Ser Tyr Ile Asn Gly Val Thr Thr Ser Lys Pro | 85  | 90  | 95  |
| Gly Val Ser Leu Val Tyr Ser Met Pro Ser Arg Asn Leu Ser Leu Arg | 100 | 105 | 110 |
| Leu Glu Gly Leu Gln Glu Lys Asp Ser Gly Pro Tyr Ser Cys Ser Val | 115 | 120 | 125 |
| Asn Val Gln Asp Lys Gln Gly Lys Ser Arg Gly His Ser Ile Lys Thr | 130 | 135 | 140 |
| Leu Glu Leu Asn Val Leu Val Pro Pro Ala Pro Pro Ser Cys Arg Leu | 145 | 150 | 155 |
| Gln Gly Val Pro His Val Gly Ala Asn Val Thr Leu Ser Cys Gln Ser | 165 | 170 | 175 |
| Pro Arg Ser Lys Pro Ala Val Gln Tyr Gln Trp Asp Arg Gln Leu Pro | 180 | 185 | 190 |
| Ser Phe Gln Thr Phe Phe Ala Pro Ala Leu Asp Val Ile Arg Gly Ser | 195 | 200 | 205 |
| Leu Ser Leu Thr Asn Leu Ser Ser Ser Met Ala Gly Val Tyr Val Cys | 210 | 215 | 220 |
| Lys Ala His Asn Glu Val Gly Thr Ala Gln Cys Asn Val Thr Leu Glu | 225 | 230 | 235 |
| Val Ser Thr Gly Pro Gly Ala Ala Val Val Ala Gly Ala Val Val Gly | 245 | 250 | 255 |
| Thr Leu Val Gly Leu Gly Leu Leu Ala Gly Leu Val Leu Leu Tyr His | 260 | 265 | 270 |
| Arg Arg Gly Lys Ala Leu Glu Glu Pro Ala Asn Asp Ile Lys Glu Asp | 275 | 280 | 285 |

0905060708091011121314

Ala Ile Ala Pro Arg Thr Leu Pro Trp Pro Lys Ser Ser Asp Thr Ile  
 290 295 300

Ser Lys Asn Gly Thr Leu Ser Ser Val Thr Ser Ala Arg Ala Leu Arg  
 305 310 315 320

Pro Pro His Gly Pro Pro Arg Pro Gly Ala Leu Thr Pro Thr Pro Ser  
 325 330 335

Leu Ser Ser Gln Ala Leu Pro Ser Pro Arg Leu Pro Thr Thr Asp Gly  
 340 345 350

Ala His Pro Gln Pro Ile Ser Pro Ile Pro Gly Gly Val Ser Ser Ser  
 355 360 365

Gly Leu Ser Arg Met Gly Ala Val Pro Val Met Val Pro Ala Gln Ser  
 370 375 380

Gln Ala Gly Ser Leu Val  
 385 390

<210> 40

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
 oligonucleotide probe

<400> 40

aggggtctcca ggagaaagac tc

22

<210> 41

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
 oligonucleotide probe

<400> 41

attgtgggcc ttgcagacat agac

24

<210> 42

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
 oligonucleotide probe

00905036-074004

<400> 42  
 ggccacagca tcaaaacctt agaactcaat gtactgggtc ctccagctcc 50  
  
 <210> 43  
 <211> 18  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: Synthetic  
 oligonucleotide probe  
  
 <400> 43  
 gtgtgacaca gcgtgggc 18  
  
 <210> 44  
 <211> 18  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: Synthetic  
 oligonucleotide probe  
  
 <400> 44  
 gaccggcagg cttctgcg 18  
  
 <210> 45  
 <211> 25  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: Synthetic  
 oligonucleotide probe  
  
 <400> 45  
 cagcagcttc agccaccagg agtgg 25  
  
 <210> 46  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: Synthetic  
 oligonucleotide probe  
  
 <400> 46  
 ctgagccgtg ggctgcagtc tcgc 24  
  
 <210> 47



|             |             |             |             |             |             |      |
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| <400> 48    |             |             |             |             |             |      |
| cgccaccact  | gcgggccaccg | ccaatgaaac  | gcctcccgc   | cctagtgggt  | ttttccactt  | 60   |
| tgttgaattg  | ttcctatact  | caaaattgca  | ccaagacacc  | ttgtctccca  | aatgcaaaat  | 120  |
| gtgaaatacg  | caatggaatt  | gaagcctgct  | attgcaacat  | gggattttca  | ggaaatgggtg | 180  |
| tcacaatttg  | tgaagatgat  | aatgaatgtg  | gaaattttaac | tcagtcctgt  | ggcgaaaaatg | 240  |
| ctaatttgcac | taacacagaa  | ggaagtattt  | attgatatgt  | tgtacctggc  | ttcagatcca  | 300  |
| cgaagtaacca | agacaggttt  | atcactaatg  | attggaaccgt | ctgtatagaa  | aatgtgaattg | 360  |
| caaaactgcc  | tttagataat  | gtctgtatag  | ctgcaaatat  | taataaaaact | ttaacaaaaa  | 420  |
| tcagatccat  | aaaagaacct  | gtggctttgc  | tacaagaagt  | ctatagaaat  | tctgtgacag  | 480  |
| atctttcacc  | aacagatata  | attacatata  | tagaaatatt  | agctgaatca  | tcttcattac  | 540  |
| taggttacaa  | gaacaacact  | atctcagcca  | aggacaccct  | ttctaactca  | actcttactg  | 600  |
| aatttgtaaa  | aaccgtgaat  | aattttgttc  | aaagggatac  | at ttgtagt  | tgggacaagt  | 660  |
| tatctgtgaa  | tcataggaga  | acacatctta  | caaaactcat  | gcacactgtt  | gaacaagcta  | 720  |
| ctttaaggat  | atcccagagc  | ttccaaaaga  | ccacagagtt  | tgatacaaat  | tcaacggata  | 780  |
| tagctctcaa  | agttttcttt  | tttgattcat  | ataacatgaa  | acataattcat | cctcatatga  | 840  |
| atatggtatg  | agactacata  | aatatatttc  | caagagaaaa  | agctgcata   | gattcaaatg  | 900  |
| gcaatgttgc  | agttgcattt  | ttatatatta  | agagtattgg  | tcctttgctt  | tcatcatctg  | 960  |
| acaacttctt  | attgaaacct  | caaaattatg  | ataattctga  | agaggaggaa  | agagtcata   | 1020 |
| cttcagtaat  | ttcagtctca  | atgagctcaa  | accacccac   | attatatgaa  | cttgaaaaaa  | 1080 |
| taacattttac | attaagtcac  | cgaaaggcca  | cagataggta  | taggagctca  | tgtgcatttt  | 1140 |
| ggaattactc  | acctgatacc  | atgaatggca  | gctggctctc  | agagggctgt  | gagctgacat  | 1200 |
| actcaaataga | gaccacacac  | tcatgccgct  | gtaatcacct  | gacacatttt  | gcaattttga  | 1260 |
| tgtcctctgg  | tccttccatt  | ggtattaaag  | attataatat  | tcttacaagg  | atcactcaac  | 1320 |
| taggaataat  | tatttccactg | atttgtcttg  | ccatatgcac  | ttttaccttc  | tggttctttca | 1380 |
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| ctgaacttgt  | ttttcttggt  | gggatacaata | caataactaa  | taagctcttc  | tgttcaatca  | 1500 |
| ttgccggact  | gctacactac  | ttcttttttag | ctgcttttgc  | atggatgtgc  | attgaaggca  | 1560 |
| tacatctcta  | tctcattggt  | gtgggtgtca  | tctacaacaa  | gggatttttg  | cacaagaatt  | 1620 |
| tttatatctt  | tggctatcta  | agcccagccg  | tggtagttgg  | at ttctcgga | gcactaggat  | 1680 |
| acagatatata | tggcacaacc  | aaagtatgtt  | ggcttagcac  | cgaaaaacaac | tttatttggga | 1740 |
| gttttatagg  | accagcatgc  | ctaatacttc  | ttgttaattc  | c ttggctttt | ggagtcata   | 1800 |
| tatacaaagt  | ttttcgtcac  | actgcagggt  | tgaaccaga   | agttagttgc  | tttgagaaca  | 1860 |
| taagggtcttg | tgcaagagga  | gcctcgctc   | ttctgttctt  | tctcggcacc  | acctggatct  | 1920 |
| ttggggttct  | ccatgttgtg  | cacgcatact  | tggttacagc  | ttacctcttc  | acagtcagca  | 1980 |
| atgctttcca  | gggagatgtt  | at ttttttat | tctgtgtgtg  | tttatctaga  | aagattcaag  | 2040 |
| aagaatatta  | cgatgtgttc  | aaaaatgtcc  | ctgtgtgttt  | tggatgttta  | aggtaaacat  | 2100 |
| agagaatqgt  | ggataattac  | aactgcacaa  | aaataaaaaa  | tccaagctgt  | ggatgaccaa  | 2160 |

```

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```

<210> 49

<211> 690

<212> PRT

<213> Homo sapiens

<400> 49

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Met Lys Arg Leu Pro Leu Leu Val Val Phe Ser Thr Leu Leu Asn Cys
  1                      5                      10                      15

```

```

Ser Tyr Thr Gln Asn Cys Thr Lys Thr Pro Cys Leu Pro Asn Ala Lys
          20                      25                      30

```

```

Cys Glu Ile Arg Asn Gly Ile Glu Ala Cys Tyr Cys Asn Met Gly Phe
          35                      40                      45

```

```

Ser Gly Asn Gly Val Thr Ile Cys Glu Asp Asp Asn Glu Cys Gly Asn
          50                      55                      60

```

```

Leu Thr Gln Ser Cys Gly Glu Asn Ala Asn Cys Thr Asn Thr Glu Gly
          65                      70                      75                      80

```

```

Ser Tyr Tyr Cys Met Cys Val Pro Gly Phe Arg Ser Ser Ser Asn Gln
          85                      90                      95

```

```

Asp Arg Phe Ile Thr Asn Asp Gly Thr Val Cys Ile Glu Asn Val Asn
          100                      105                      110

```

```

Ala Asn Cys His Leu Asp Asn Val Cys Ile Ala Ala Asn Ile Asn Lys
          115                      120                      125

```

```

Thr Leu Thr Lys Ile Arg Ser Ile Lys Glu Pro Val Ala Leu Leu Gln
          130                      135                      140

```

```

Glu Val Tyr Arg Asn Ser Val Thr Asp Leu Ser Pro Thr Asp Ile Ile
          145                      150                      155                      160

```

```

Thr Tyr Ile Glu Ile Leu Ala Glu Ser Ser Ser Leu Leu Gly Tyr Lys
          165                      170                      175

```

```

Asn Asn Thr Ile Ser Ala Lys Asp Thr Leu Ser Asn Ser Thr Leu Thr

```

|   |     |     |     |     |     |
|---|-----|-----|-----|-----|-----|
|   | 180 |     | 185 |     | 190 |
| Glu Phe Val Lys Thr Val Asn Asn Phe Val Gln Arg Asp Thr Phe Val | 195 | 200 | 205 |     |     |
| Val Trp Asp Lys Leu Ser Val Asn His Arg Arg Thr His Leu Thr Lys | 210 | 215 | 220 |     |     |
| Leu Met His Thr Val Glu Gln Ala Thr Leu Arg Ile Ser Gln Ser Phe | 225 | 230 | 235 | 240 |     |
| Gln Lys Thr Thr Glu Phe Asp Thr Asn Ser Thr Asp Ile Ala Leu Lys | 245 | 250 | 255 |     |     |
| Val Phe Phe Phe Asp Ser Tyr Asn Met Lys His Ile His Pro His Met | 260 | 265 | 270 |     |     |
| Asn Met Asp Gly Asp Tyr Ile Asn Ile Phe Pro Lys Arg Lys Ala Ala | 275 | 280 | 285 |     |     |
| Tyr Asp Ser Asn Gly Asn Val Ala Val Ala Phe Leu Tyr Tyr Lys Ser | 290 | 295 | 300 |     |     |
| Ile Gly Pro Leu Leu Ser Ser Ser Asp Asn Phe Leu Leu Lys Pro Gln | 305 | 310 | 315 | 320 |     |
| Asn Tyr Asp Asn Ser Glu Glu Glu Glu Arg Val Ile Ser Ser Val Ile | 325 | 330 | 335 |     |     |
| Ser Val Ser Met Ser Ser Asn Pro Pro Thr Leu Tyr Glu Leu Glu Lys | 340 | 345 | 350 |     |     |
| Ile Thr Phe Thr Leu Ser His Arg Lys Val Thr Asp Arg Tyr Arg Ser | 355 | 360 | 365 |     |     |
| Leu Cys Ala Phe Trp Asn Tyr Ser Pro Asp Thr Met Asn Gly Ser Trp | 370 | 375 | 380 |     |     |
| Ser Ser Glu Gly Cys Glu Leu Thr Tyr Ser Asn Glu Thr His Thr Ser | 385 | 390 | 395 | 400 |     |
| Cys Arg Cys Asn His Leu Thr His Phe Ala Ile Leu Met Ser Ser Gly | 405 | 410 | 415 |     |     |
| Pro Ser Ile Gly Ile Lys Asp Tyr Asn Ile Leu Thr Arg Ile Thr Gln | 420 | 425 | 430 |     |     |
| Leu Gly Ile Ile Ile Ser Leu Ile Cys Leu Ala Ile Cys Ile Phe Thr | 435 | 440 | 445 |     |     |
| Phe Trp Phe Phe Ser Glu Ile Gln Ser Thr Arg Thr Thr Ile His Lys | 450 | 455 | 460 |     |     |

0905056-071004

Asn Leu Cys Cys Ser Leu Phe Leu Ala Glu Leu Val Phe Leu Val Gly  
465 470 475 480

Ile Asn Thr Asn Thr Asn Lys Leu Phe Cys Ser Ile Ile Ala Gly Leu  
485 490 495

Leu His Tyr Phe Phe Leu Ala Ala Phe Ala Trp Met Cys Ile Glu Gly  
500 505 510

Ile His Leu Tyr Leu Ile Val Val Gly Val Ile Tyr Asn Lys Gly Phe  
515 520 525

Leu His Lys Asn Phe Tyr Ile Phe Gly Tyr Leu Ser Pro Ala Val Val  
530 535 540

Val Gly Phe Ser Ala Ala Leu Gly Tyr Arg Tyr Tyr Gly Thr Thr Lys  
545 550 555 560

Val Cys Trp Leu Ser Thr Glu Asn Asn Phe Ile Trp Ser Phe Ile Gly  
565 570 575

Pro Ala Cys Leu Ile Ile Leu Val Asn Leu Leu Ala Phe Gly Val Ile  
580 585 590

Ile Tyr Lys Val Phe Arg His Thr Ala Gly Leu Lys Pro Glu Val Ser  
595 600 605

Cys Phe Glu Asn Ile Arg Ser Cys Ala Arg Gly Ala Leu Ala Leu Leu  
610 615 620

Phe Leu Leu Gly Thr Thr Trp Ile Phe Gly Val Leu His Val Val His  
625 630 635 640

Ala Ser Val Val Thr Ala Tyr Leu Phe Thr Val Ser Asn Ala Phe Gln  
645 650 655

Gly Met Phe Ile Phe Leu Phe Leu Cys Val Leu Ser Arg Lys Ile Gln  
660 665 670

Glu Glu Tyr Tyr Arg Leu Phe Lys Asn Val Pro Cys Cys Phe Gly Cys  
675 680 685

Leu Arg  
690

<210> 50

<211> 589

<212> DNA

<213> Homo sapiens

<220>

<221> modified\_base

<222> (61)

TEB2720-95050560

<223> a, t, c or g

<400> 50

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ngaaaagccg gcatatggat tcaaattggca atgttgcaat tgcattttta tattataaga 120
gtattgggtcc ctttgctttc atcatctgac aacttcttat tgaaacctca aaattatgat 180
aattctgaag aggaggaaa agtcatatct tcagtaattt cagtctcaat gagctcaaac 240
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gataggtata ggagtctatg tggcattttg gaatactcac ctgataccat gaatggcagc 360
tggctcttcag agggctgtga gctgacatac tcaaatagaga cccacacctc atgccgctgt 420
aatcacctga cacattttgc aattttgatg tcctctgggc cttccattgg tattaagat 480
tataatattc ttacaaggat cactcaacta ggaataatta ttccactgat ttgtcttgcc 540
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```

<210> 51

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
oligonucleotide probe

<400> 51

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ggtaatgagc tccattacag 20

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<210> 52

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
oligonucleotide probe

<400> 52

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ggagtagaaa gcgcatgg 18

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<210> 53

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
oligonucleotide probe

<400> 53

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cacctgatac catgaatggc ag 22

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<210> 54

<211> 18

<212> DNA

T00T20: 99999999

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
oligonucleotide probe

<400> 54

cgagctcgaa ttaattcg

18

<210> 55

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
oligonucleotide probe

<400> 55

ggatctcctg agctcagg

18

<210> 56

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
oligonucleotide probe

<400> 56

cctagttgag tgatccttgt aag

23

<210> 57

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
oligonucleotide probe

<400> 57

atgagaccca cacctcatgc cgctgtaatc acctgacaca ttttgcaatt

50

<210> 58

<211> 2137

<212> DNA

<213> Homo sapiens

<400> 58

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cgctaagcga ggctctctcc tcccgcagat ccgaacggcc tgggcgggggt caccceggct 120

0990506E-07101

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<210> 59
<211> 216
<212> PRT
<213> Homo sapiens
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Met Arg Ser Gly Cys Val Val Val His Val Trp Ile Leu Ala Gly Leu  
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Trp Leu Ala Val Ala Gly Arg Pro Leu Ala Phe Ser Asp Ala Gly Pro  
20 25 30

His Val His Tyr Gly Trp Gly Asp Pro Ile Arg Leu Arg His Leu Tyr  
35 40 45

Thr Ser Gly Pro His Gly Leu Ser Ser Cys Phe Leu Arg Ile Arg Ala  
50 55 60

Asp Gly Val Val Asp Cys Ala Arg Gly Gln Ser Ala His Ser Leu Leu  
 65 70 75 80  
 Glu Ile Lys Ala Val Ala Leu Arg Thr Val Ala Ile Lys Gly Val His  
 85 90 95  
 Ser Val Arg Tyr Leu Cys Met Gly Ala Asp Gly Lys Met Gln Gly Leu  
 100 105 110  
 Leu Gln Tyr Ser Glu Glu Asp Cys Ala Phe Glu Glu Glu Ile Arg Pro  
 115 120 125  
 Asp Gly Tyr Asn Val Tyr Arg Ser Glu Lys His Arg Leu Pro Val Ser  
 130 135 140  
 Leu Ser Ser Ala Lys Gln Arg Gln Leu Tyr Lys Asn Arg Gly Phe Leu  
 145 150 155 160  
 Pro Leu Ser His Phe Leu Pro Met Leu Pro Met Val Pro Glu Glu Pro  
 165 170 175  
 Glu Asp Leu Arg Gly His Leu Glu Ser Asp Met Phe Ser Ser Pro Leu  
 180 185 190  
 Glu Thr Asp Ser Met Asp Pro Phe Gly Leu Val Thr Gly Leu Glu Ala  
 195 200 205  
 Val Arg Ser Pro Ser Phe Glu Lys  
 210 215

<210> 60

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
oligonucleotide probe

<400> 60

atccgcccag atggctacaa tgtgta

26

<210> 61

<211> 42

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
oligonucleotide probe

<400> 61

gcctcccggc ctccctgagc agtgccaaac agcggcagtg ta

42



<210> 62  
 <211> 22  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
 oligonucleotide probe

<400> 62  
 ccagtcggt gacaagccca aa 22

<210> 63  
 <211> 1295  
 <212> DNA  
 <213> Homo sapiens

<400> 63  
 cccagaagtt caagggcccc cggcctcctg cgctcctgcc gccgggaccc tcgacctcct 60  
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 gctgctgctg cgctacctgg tggctgccct gggctatcat aaggcctatg ggttttctgc 180  
 cccaaaagac caacaagtag tcacagcagt agagtaccaa gaggcctatt tagcctgcaa 240  
 aaccccaaag aagactgttt cctccagatt agagtggaag aaactgggtc ggagtgtctc 300  
 ctttgtctac tatcaacaga ctcttcaagg tgatttttaa aatcgagctg agatgataga 360  
 tttcaatatc cggatcaaaa atgtgacaag aagtgatgcg gggaaatata gttgtgaagt 420  
 tagtgcccca tctgagcaag gccaaaacct ggaagaggat acagtcactc tggaagtatt 480  
 agtggctcca gcagttccat catgtgaagt accctcttct gctctgagtg gaactgtggt 540  
 agagctacga tgtcaagaca aagaagggaa tccagctcct gaatacacat ggtttaagga 600  
 tggcatccgt ttgctagaaa atcccagact tggctcccaa agcaccaaca gctcatacac 660  
 aatgaatata aaaactggaa ctctgcaatt taatactgtt tccaaactgg acactggaga 720  
 atattcctgt gaagcccgcga attctgttgg atatcgagcagg tgcctgggga aacgaatgca 780  
 agtagatgat ctcaacataa gtggcatcat agcagccgta gtagttgtgg ccttagtgat 840  
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 acccgggagg cggaggttgc agtgagctga gatcacgcca ctgcagtcca gcctgggtaa 1200  
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 tgtagaattc ttacaataaa tatagcttga tattc 1295

<210> 64  
 <211> 312  
 <212> PRT  
 <213> Homo sapiens

<400> 64  
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 1 5 10 15  
 Leu Val Val Ala Leu Gly Tyr His Lys Ala Tyr Gly Phe Ser Ala Pro  
 20 25 30

CCGCGGACCC

Lys Asp Gln Gln Val Val Thr Ala Val Glu Tyr Gln Glu Ala Ile Leu  
           35                                  40                                  45  
 Ala Cys Lys Thr Pro Lys Lys Thr Val Ser Ser Arg Leu Glu Trp Lys  
           50                                  55                                  60  
 Lys Leu Gly Arg Ser Val Ser Phe Val Tyr Tyr Gln Gln Thr Leu Gln  
           65                                  70                                  75                                  80  
 Gly Asp Phe Lys Asn Arg Ala Glu Met Ile Asp Phe Asn Ile Arg Ile  
                                   85                                  90                                  95  
 Lys Asn Val Thr Arg Ser Asp Ala Gly Lys Tyr Arg Cys Glu Val Ser  
                                   100                                  105                                  110  
 Ala Pro Ser Glu Gln Gly Gln Asn Leu Glu Glu Asp Thr Val Thr Leu  
           115                                  120                                  125  
 Glu Val Leu Val Ala Pro Ala Val Pro Ser Cys Glu Val Pro Ser Ser  
           130                                  135                                  140  
 Ala Leu Ser Gly Thr Val Val Glu Leu Arg Cys Gln Asp Lys Glu Gly  
           145                                  150                                  155                                  160  
 Asn Pro Ala Pro Glu Tyr Thr Trp Phe Lys Asp Gly Ile Arg Leu Leu  
                                   165                                  170                                  175  
 Glu Asn Pro Arg Leu Gly Ser Gln Ser Thr Asn Ser Ser Tyr Thr Met  
                                   180                                  185                                  190  
 Asn Thr Lys Thr Gly Thr Leu Gln Phe Asn Thr Val Ser Lys Leu Asp  
           195                                  200                                  205  
 Thr Gly Glu Tyr Ser Cys Glu Ala Arg Asn Ser Val Gly Tyr Arg Arg  
           210                                  215                                  220  
 Cys Pro Gly Lys Arg Met Gln Val Asp Asp Leu Asn Ile Ser Gly Ile  
           225                                  230                                  235                                  240  
 Ile Ala Ala Val Val Val Val Ala Leu Val Ile Ser Val Cys Gly Leu  
                                   245                                  250                                  255  
 Gly Val Cys Tyr Ala Gln Arg Lys Gly Tyr Phe Ser Lys Glu Thr Ser  
           260                                  265                                  270  
 Phe Gln Lys Ser Asn Ser Ser Ser Lys Ala Thr Thr Met Ser Glu Asn  
           275                                  280                                  285  
 Val Gln Trp Leu Thr Pro Val Ile Pro Ala Leu Trp Lys Ala Ala Ala  
           290                                  295                                  300  
 Gly Gly Ser Arg Gly Gln Glu Phe

09905056-07204  
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305

310

&lt;210&gt; 65

&lt;211&gt; 22

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: Synthetic  
oligonucleotide probe

&lt;400&gt; 65

atcgttgtga agttagtgcc cc

22

&lt;210&gt; 66

&lt;211&gt; 23

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: Synthetic  
oligonucleotide probe

&lt;400&gt; 66

acctgcgata tccaacagaa ttg

23

&lt;210&gt; 67

&lt;211&gt; 48

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: Synthetic  
oligonucleotide probe

&lt;400&gt; 67

ggaagaggat acagtcactc tggaagtatt agtggctcca gcagttcc

48

&lt;210&gt; 68

&lt;211&gt; 2639

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 68

gacatcggag gtgggctagc actgaaactg cttttcaaga cgaggaagag gaggagaaag 60  
agaaagaaga ggaagatggt gggcaacatt tatttaacat gctccacagc ccggaccctg 120  
gcatcatgct gctattcctg caaatactga agaagcatgg gatttaaata ttttacttct 180  
aaataaatga attactcaat ctcctatgac catctataca tactccacct tcaaaaagta 240  
catcaatatt atatcattaa ggaaatagta accttctctt ctccaatatg catgacattt 300  
ttggacaatg caattgtggc actggcactt atttcagtga agaaaaactt tgtgggttcta 360  
tggcattcat catttgacaa atgcaagcat cttccttatc aatcagctcc tattgaactt 420  
actagcactg actgtggaat ccttaagggc ccattacatt tctgaagaag aaagctaaga 480  
tgaaggacat gccactccga attcatgtgc tacttggcct agctatcact acactagtag 540

aagctgtaga taaaaaagtg gattgtccac gggtatgtac gtgtgaaatc aggccttggt 600  
ttacacccag atccatttat atggaagcat ctacagtggg ttgtaatgat ttaggtcttt 660  
taactttccc agccagattg ccagctaaca cacagattct tctcctacag actaacaata 720  
ttgcaaaaat tgaatactcc acagactttc cagtaaacct tactggcctg gatttatctc 780  
aaaacaattt atcttcagtc accaatatta atgtaaaaaa gatgcctcag ctcttttctg 840  
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gtaagtgggt tgatgctctt ccaaatactag agattctgat gattggggaa aatccaatta 1080  
tcagaatcaa agacatgaac tttaaagctc ttatcaatct tcgcagcctg gttatagctg 1140  
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tctcttttta cgataacagg cttattaaag taccatctgt tgctcttcaa aaagttgtaa 1260  
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taaattctctg ggaagcagga aaagaaaaaa gtacatcact gaaagtaaaa gcaactgtta 2580  
taggtttacc aacaaatatg tcctaaaaaac caccaaggaa acctactcca aaatgaac 2639

&lt;210&gt; 69

&lt;211&gt; 708

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 69

Met Lys Asp Met Pro Leu Arg Ile His Val Leu Leu Gly Leu Ala Ile  
1 5 10 15

Thr Thr Leu Val Gln Ala Val Asp Lys Lys Val Asp Cys Pro Arg Leu  
20 25 30

Cys Thr Cys Glu Ile Arg Pro Trp Phe Thr Pro Arg Ser Ile Tyr Met  
35 40 45

Glu Ala Ser Thr Val Asp Cys Asn Asp Leu Gly Leu Leu Thr Phe Pro  
50 55 60



|   |     |     |
|---|-----|-----|
| 340   | 345 | 350 |
| Thr Ile Glu Ser Leu Pro Asn Leu Lys Glu Ile Ser Ile His Ser Asn |     |     |
| 355   | 360 | 365 |
| Pro Ile Arg Cys Asp Cys Val Ile Arg Trp Met Asn Met Asn Lys Thr |     |     |
| 370   | 375 | 380 |
| Asn Ile Arg Phe Met Glu Pro Asp Ser Leu Phe Cys Val Asp Pro Pro |     |     |
| 385   | 390 | 395 |
| Glu Phe Gln Gly Gln Asn Val Arg Gln Val His Phe Arg Asp Met Met |     |     |
| 405   | 410 | 415 |
| Glu Ile Cys Leu Pro Leu Ile Ala Pro Glu Ser Phe Pro Ser Asn Leu |     |     |
| 420   | 425 | 430 |
| Asn Val Glu Ala Gly Ser Tyr Val Ser Phe His Cys Arg Ala Thr Ala |     |     |
| 435   | 440 | 445 |
| Glu Pro Gln Pro Glu Ile Tyr Trp Ile Thr Pro Ser Gly Gln Lys Leu |     |     |
| 450   | 455 | 460 |
| Leu Pro Asn Thr Leu Thr Asp Lys Phe Tyr Val His Ser Glu Gly Thr |     |     |
| 465   | 470 | 475 |
| Leu Asp Ile Asn Gly Val Thr Pro Lys Glu Gly Gly Leu Tyr Thr Cys |     |     |
| 485   | 490 | 495 |
| Ile Ala Thr Asn Leu Val Gly Ala Asp Leu Lys Ser Val Met Ile Lys |     |     |
| 500   | 505 | 510 |
| Val Asp Gly Ser Phe Pro Gln Asp Asn Asn Gly Ser Leu Asn Ile Lys |     |     |
| 515   | 520 | 525 |
| Ile Arg Asp Ile Gln Ala Asn Ser Val Leu Val Ser Trp Lys Ala Ser |     |     |
| 530   | 535 | 540 |
| Ser Lys Ile Leu Lys Ser Ser Val Lys Trp Thr Ala Phe Val Lys Thr |     |     |
| 545   | 550 | 555 |
| Glu Asn Ser His Ala Ala Gln Ser Ala Arg Ile Pro Ser Asp Val Lys |     |     |
| 565   | 570 | 575 |
| Val Tyr Asn Leu Thr His Leu Asn Pro Ser Thr Glu Tyr Lys Ile Cys |     |     |
| 580   | 585 | 590 |
| Ile Asp Ile Pro Thr Ile Tyr Gln Lys Asn Arg Lys Lys Cys Val Asn |     |     |
| 595   | 600 | 605 |
| Val Thr Thr Lys Gly Leu His Pro Asp Gln Lys Glu Tyr Glu Lys Asn |     |     |
| 610   | 615 | 620 |

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<210> 70
<211> 1305
<212> DNA
<213> Homo sapiens
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<210> 71
<211> 259
<212> PRT
<213> Homo sapiens
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<400> 71

Met Asn Leu Val Asp Leu Trp Leu Thr Arg Ser Leu Ser Met Cys Leu  
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 20 25 30  
 Met Cys Pro Lys Gly Cys Leu Cys Ser Ser Ser Gly Gly Leu Asn Val  
 35 40 45  
 Thr Cys Ser Asn Ala Asn Leu Lys Glu Ile Pro Arg Asp Leu Pro Pro  
 50 55 60  
 Glu Thr Val Leu Leu Tyr Leu Asp Ser Asn Gln Ile Thr Ser Ile Pro  
 65 70 75 80  
 Asn Glu Ile Phe Lys Asp Leu His Gln Leu Arg Val Leu Asn Leu Ser  
 85 90 95  
 Lys Asn Gly Ile Glu Phe Ile Asp Glu His Ala Phe Lys Gly Val Ala  
 100 105 110  
 Glu Thr Leu Gln Thr Leu Asp Leu Ser Asp Asn Arg Ile Gln Ser Val  
 115 120 125  
 His Lys Asn Ala Phe Asn Asn Leu Lys Ala Arg Ala Arg Ile Ala Asn  
 130 135 140  
 Asn Pro Trp His Cys Asp Cys Thr Leu Gln Gln Val Leu Arg Ser Met  
 145 150 155 160  
 Ala Ser Asn His Glu Thr Ala His Asn Val Ile Cys Lys Thr Ser Val  
 165 170 175  
 Leu Asp Glu His Ala Gly Arg Pro Phe Leu Asn Ala Ala Asn Asp Ala  
 180 185 190  
 Asp Leu Cys Asn Leu Pro Lys Lys Thr Thr Asp Tyr Ala Met Leu Val  
 195 200 205  
 Thr Met Phe Gly Trp Phe Thr Met Val Ile Ser Tyr Val Val Tyr Tyr  
 210 215 220  
 Val Arg Gln Asn Gln Glu Asp Ala Arg Arg His Leu Glu Tyr Leu Lys  
 225 230 235 240  
 Ser Leu Pro Ser Arg Gln Lys Lys Ala Asp Glu Pro Asp Asp Ile Ser  
 245 250 255  
 Thr Val Val

&lt;210&gt; 72

&lt;211&gt; 2290

T00T20"95050550



&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 72

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accgagccga gcggaccgaa ggcgcgcccc agatgcaggt gagcaagagg atgctggcgg 60
ggggcgtgag gagcatgccc agccccctcc tggcctgctg gcagcccatc ctctgctggt 120
tgctgggctc agtgcgtgtca ggctcggcca cgggctgccc gccccgctgc gactgctccg 180
cccaggaccg cgctgtgctg tgcacccgca agtgccttgt ggcagtcccc gagggcatcc 240
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agttcgccag cttcccgcac ctggaggagc tggagctcaa cgagaacatc gtgagcgccg 360
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gcctgaagct catcccgcta ggcgtcttca ctggcctcag caacctgacc aagcaggaca 480
tcagcgagaa caagatcggt atcctactgg actacatggt tcaggacctg tacaacctca 540
agtcaactgga ggttggcgac aatgacctcg tctacatctc tcaccgcgcc ttacgcggcc 600
tcaacagcct ggagcagctg acgctggaga aatgcaacct gacctccatc cccaccgagg 660
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aaaaaaaaa 2290

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&lt;210&gt; 73

&lt;211&gt; 620

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 73

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Met Gln Val Ser Lys Arg Met Leu Ala Gly Gly Val Arg Ser Met Pro
1 5 10 15

```



Ser Met Leu His Glu Leu Leu Arg Leu Gln Glu Ile Gln Leu Val Gly  
 305 310 315 320  
 Gly Gln Leu Ala Val Val Glu Pro Tyr Ala Phe Arg Gly Leu Asn Tyr  
 325 330 335  
 Leu Arg Val Leu Asn Val Ser Gly Asn Gln Leu Thr Thr Leu Glu Glu  
 340 345 350  
 Ser Val Phe His Ser Val Gly Asn Leu Glu Thr Leu Ile Leu Asp Ser  
 355 360 365  
 Asn Pro Leu Ala Cys Asp Cys Arg Leu Leu Trp Val Phe Arg Arg Arg  
 370 375 380  
 Trp Arg Leu Asn Phe Asn Arg Gln Gln Pro Thr Cys Ala Thr Pro Glu  
 385 390 395 400  
 Phe Val Gln Gly Lys Glu Phe Lys Asp Phe Pro Asp Val Leu Leu Pro  
 405 410 415  
 Asn Tyr Phe Thr Cys Arg Arg Ala Arg Ile Arg Asp Arg Lys Ala Gln  
 420 425 430  
 Gln Val Phe Val Asp Glu Gly His Thr Val Gln Phe Val Cys Arg Ala  
 435 440 445  
 Asp Gly Asp Pro Pro Pro Ala Ile Leu Trp Leu Ser Pro Arg Lys His  
 450 455 460  
 Leu Val Ser Ala Lys Ser Asn Gly Arg Leu Thr Val Phe Pro Asp Gly  
 465 470 475 480  
 Thr Leu Glu Val Arg Tyr Ala Gln Val Gln Asp Asn Gly Thr Tyr Leu  
 485 490 495  
 Cys Ile Ala Ala Asn Ala Gly Gly Asn Asp Ser Met Pro Ala His Leu  
 500 505 510  
 His Val Arg Ser Tyr Ser Pro Asp Trp Pro His Gln Pro Asn Lys Thr  
 515 520 525  
 Phe Ala Phe Ile Ser Asn Gln Pro Gly Glu Gly Glu Ala Asn Ser Thr  
 530 535 540  
 Arg Ala Thr Val Pro Phe Pro Phe Asp Ile Lys Thr Leu Ile Ile Ala  
 545 550 555 560  
 Thr Thr Met Gly Phe Ile Ser Phe Leu Gly Val Val Leu Phe Cys Leu  
 565 570 575  
 Val Leu Leu Phe Leu Trp Ser Arg Gly Lys Gly Asn Thr Lys His Asn

|  |     |     |     |    |
|--|-----|-----|-----|----|
|  | 580 | 585 | 590 |    |
| Ile Glu Ile Glu Tyr Val Pro Arg Lys Ser Asp Ala Gly Ile Ser Ser              |     |     |     |    |
| 595  | 600 | 605 |     |    |
| Ala Asp Ala Pro Arg Lys Phe Asn Met Lys Met Ile                              |     |     |     |    |
| 610  | 615 | 620 |     |    |
| <210> 74   |     |     |     |    |
| <211> 22   |     |     |     |    |
| <212> DNA  |     |     |     |    |
| <213> Artificial Sequence  |     |     |     |    |
| <220>  |     |     |     |    |
| <223> Description of Artificial Sequence: Synthetic<br>oligonucleotide probe |     |     |     |    |
| <400> 74   |     |     |     |    |
| tcacctggag cctttattgg cc   |     |     |     | 22 |
| <210> 75   |     |     |     |    |
| <211> 23   |     |     |     |    |
| <212> DNA  |     |     |     |    |
| <213> Artificial Sequence  |     |     |     |    |
| <220>  |     |     |     |    |
| <223> Description of Artificial Sequence: Synthetic<br>oligonucleotide probe |     |     |     |    |
| <400> 75   |     |     |     |    |
| ataccagcta taaccaggct gcg  |     |     |     | 23 |
| <210> 76   |     |     |     |    |
| <211> 52   |     |     |     |    |
| <212> DNA  |     |     |     |    |
| <213> Artificial Sequence  |     |     |     |    |
| <220>  |     |     |     |    |
| <223> Description of Artificial Sequence: Synthetic<br>oligonucleotide probe |     |     |     |    |
| <400> 76   |     |     |     |    |
| caacagtaag tggtttgatg ctcttccaaa tctagagatt ctgatgattg                       |     |     |     | 50 |
| gg   |     |     |     | 52 |
| <210> 77   |     |     |     |    |
| <211> 22   |     |     |     |    |
| <212> DNA  |     |     |     |    |
| <213> Artificial Sequence  |     |     |     |    |
| <220>  |     |     |     |    |
| <223> Description of Artificial Sequence: Synthetic<br>oligonucleotide probe |     |     |     |    |

<400> 77  
 ccatgtgtct cctcctacaa ag 22

<210> 78  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
 oligonucleotide probe

<400> 78  
 gggaatagat gtgatctgat tgg 23

<210> 79  
 <211> 50  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
 oligonucleotide probe

<400> 79  
 cacctgtagc aatgcaaatc tcaaggaaat acctagagat cttcctcctg 50

<210> 80  
 <211> 22  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
 oligonucleotide probe

<400> 80  
 agcaaccgcc tgaagctcat cc 22

<210> 81  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
 oligonucleotide probe

<400> 81  
 aaggcgcggt gaaagatgta gacg 24

<210> 82

<211> 50  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
 oligonucleotide probe

<400> 82  
 gactacatgt ttcaggacct gtacaacctc aagtcactgg aggttggcga 50

<210> 83  
 <211> 1685  
 <212> DNA  
 <213> Homo sapiens

<400> 83  
 cccacgcgtc cgcacctcgg ccccgggctc cgaagcggct cgggggcgcc ctttcggtca 60  
 acatcgtagt ccacccccctc cccatcccca gcccccgagg attcaggctc gccagcgccc 120  
 agccagggag cgggccggga agcgcgatgg gggccccagc cgcctcgctc ctgctcctgc 180  
 tcctgctggt cgcctgctgc tgggcgcccg gcggggccaa cctctcccag gacgacagcc 240  
 agccctggac atctgatgaa acagtgggtg ctggtggcac cgtggtgctc aagtgccaaag 300  
 tgaaagatca cgaggactca tccttgcaat ggtctaaccg tgtcagcag actctctact 360  
 ttggggagaa gagagccctt cgagataatc gaattcagct ggttacctct acgccccacg 420  
 agctcagcat cagcatcagc aatgtggccc tggcagacga gggcgagtac acctgctcaa 480  
 tcttcactat gctgtgcca actgccaagt ccctcgtcac tgtgctagga attccacaga 540  
 agcccatcat cactgggtat aaatcttcat tacgggaaaa agacacagcc accctaaact 600  
 gtcagtcttc tgggagcaag cctgcagccc ggctcacctg gagaaagggg gaccaagaac 660  
 tccacggaga accaaccgac atacaggaag atcccaatgg taaaaccttc actgtcagca 720  
 gctcggtgac attccagggt acccgggagg atgatggggc gagcatcgtg tgtctgtga 780  
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 caccaactgc gatgattagg ccagaccctc cccatcctcg tgaggggccag aagctggtgc 900  
 tacactgtga gggtcgcggc aatccagtcc cccagcagta cctatgggag aaggagggca 960  
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 tttgtactcg gtttggaatg gggagggagg agggcgggg gaggggaggg ttgccctcag 1560  
 ccctttccgt ggcttctctg cttttgggtt attattattt ttgtaacaat cccaaatcaa 1620  
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 aaaca 1685

<210> 84  
 <211> 398  
 <212> PRT  
 <213> Homo sapiens

<400> 84

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|----------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met<br>1 | Gly | Ala | Pro | Ala | Ser | Leu | Leu | Leu | Leu | Leu | Leu | Leu | Phe | Ala |     |
| 5        |     |     |     |     |     |     |     | 10  |     |     |     |     | 15  |     |     |
| Cys      | Cys | Trp | Ala | Pro | Gly | Gly | Ala | Asn | Leu | Ser | Gln | Asp | Asp | Ser | Gln |
| 20       |     |     |     |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Pro      | Trp | Thr | Ser | Asp | Glu | Thr | Val | Val | Ala | Gly | Gly | Thr | Val | Val | Leu |
| 35       |     |     |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Lys      | Cys | Gln | Val | Lys | Asp | His | Glu | Asp | Ser | Ser | Leu | Gln | Trp | Ser | Asn |
| 50       |     |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Pro      | Ala | Gln | Gln | Thr | Leu | Tyr | Phe | Gly | Glu | Lys | Arg | Ala | Leu | Arg | Asp |
| 65       |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |
| Asn      | Arg | Ile | Gln | Leu | Val | Thr | Ser | Thr | Pro | His | Glu | Leu | Ser | Ile | Ser |
| 85       |     |     |     |     |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Ile      | Ser | Asn | Val | Ala | Leu | Ala | Asp | Glu | Gly | Glu | Tyr | Thr | Cys | Ser | Ile |
| 100      |     |     |     |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Phe      | Thr | Met | Pro | Val | Arg | Thr | Ala | Lys | Ser | Leu | Val | Thr | Val | Leu | Gly |
| 115      |     |     |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Ile      | Pro | Gln | Lys | Pro | Ile | Ile | Thr | Gly | Tyr | Lys | Ser | Ser | Leu | Arg | Glu |
| 130      |     |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Lys      | Asp | Thr | Ala | Thr | Leu | Asn | Cys | Gln | Ser | Ser | Gly | Ser | Lys | Pro | Ala |
| 145      |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |
| Ala      | Arg | Leu | Thr | Trp | Arg | Lys | Gly | Asp | Gln | Glu | Leu | His | Gly | Glu | Pro |
| 165      |     |     |     |     |     |     |     |     | 170 |     |     |     |     | 175 |     |
| Thr      | Arg | Ile | Gln | Glu | Asp | Pro | Asn | Gly | Lys | Thr | Phe | Thr | Val | Ser | Ser |
| 180      |     |     |     |     |     |     |     | 185 |     |     |     |     | 190 |     |     |
| Ser      | Val | Thr | Phe | Gln | Val | Thr | Arg | Glu | Asp | Asp | Gly | Ala | Ser | Ile | Val |
| 195      |     |     |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |
| Cys      | Ser | Val | Asn | His | Glu | Ser | Leu | Lys | Gly | Ala | Asp | Arg | Ser | Thr | Ser |
| 210      |     |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |
| Gln      | Arg | Ile | Glu | Val | Leu | Tyr | Thr | Pro | Thr | Ala | Met | Ile | Arg | Pro | Asp |
| 225      |     |     |     |     | 230 |     |     |     |     | 235 |     |     |     |     | 240 |
| Pro      | Pro | His | Pro | Arg | Glu | Gly | Gln | Lys | Leu | Leu | Leu | His | Cys | Glu | Gly |
| 245      |     |     |     |     |     |     |     |     | 250 |     |     |     |     | 255 |     |
| Arg      | Gly | Asn | Pro | Val | Pro | Gln | Gln | Tyr | Leu | Trp | Glu | Lys | Glu | Gly | Ser |
| 260      |     |     |     |     |     |     |     | 265 |     |     |     |     | 270 |     |     |
| Val      | Pro | Pro | Leu | Lys | Met | Thr | Gln | Glu | Ser | Ala | Leu | Ile | Phe | Pro | Phe |
| 275      |     |     |     |     |     |     | 280 |     |     |     |     | 285 |     |     |     |

Leu Asn Lys Ser Asp Ser Gly Thr Tyr Gly Cys Thr Ala Thr Ser Asn  
 290 295 300

Met Gly Ser Tyr Lys Ala Tyr Tyr Thr Leu Asn Val Asn Asp Pro Ser  
 305 310 315 320

Pro Val Pro Ser Ser Ser Ser Thr Tyr His Ala Ile Ile Gly Gly Ile  
 325 330 335

Val Ala Phe Ile Val Phe Leu Leu Leu Ile Met Leu Ile Phe Leu Gly  
 340 345 350

His Tyr Leu Ile Arg His Lys Gly Thr Tyr Leu Thr His Glu Ala Lys  
 355 360 365

Gly Ser Asp Asp Ala Pro Asp Ala Asp Thr Ala Ile Ile Asn Ala Glu  
 370 375 380

Gly Gly Gln Ser Gly Gly Asp Asp Lys Lys Glu Tyr Phe Ile  
 385 390 395

<210> 85

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
 oligonucleotide probe

<400> 85

gctaggaatt ccacagaagc cc

22

<210> 86

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
 oligonucleotide probe

<400> 86

aacctggaat gtcaccgagc tg

22

<210> 87

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic



<400> 87  
cctagcacag tgacgagggg cttggc 26

<220>  
<223> Description of Artificial Sequence: Synthetic  
oligonucleotide probe

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<210> 89
<211> 50
<212> DNA
<213> Artificial Sequence
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<400> 89  
gccctggcag acgagggcga gtacacctgc tcaatcttca ctatgcctgt 50

|             |            |             |             |            |               |      |  |
|-------------|------------|-------------|-------------|------------|---------------|------|--|
| <400>       | 90         |             |             |            |               |      |  |
| ggggggttagg | gaggaaggaa | tccacccccca | cccccccaaa  | cccttttctt | ctccttttct    | 60   |  |
| ggcttcggac  | attggagcac | taaatagaact | tgaatttgtgt | ctgtggcgag | caggatgggtc   | 120  |  |
| gctgttactt  | tgtgatgaga | tcggggatga  | attgctcgct  | ttaaaaatgc | tgctttggat    | 180  |  |
| tctgttgctg  | gagacgtctc | tttgttttgc  | cgctggaaac  | gttacagggg | acgtttgcaa    | 240  |  |
| agagaagatc  | tgttcctgca | atgagataga  | aggggacctc  | cacgtagact | gtgaaaaaaa    | 300  |  |
| gggcttcaca  | agtctgcagc | gtttcactgc  | cccgacttcc  | cagttttacc | at ttat tttct | 360  |  |
| gcatggcaat  | tcctcactc  | gacttttccc  | taatgagttc  | gctaactttt | ataatgcggt    | 420  |  |
| tagtttgcac  | atggaaaaca | atggcttgca  | tgaaatcggt  | ccgggggctt | ttctggggct    | 480  |  |
| gcagctggtg  | aaaaggctgc | acatcaacaa  | caacaagatc  | aagtcctttc | gaaagcagac    | 540  |  |
| ttttctgggg  | ctggacgatc | tggaaatatct | ccaggctgat  | tttaatttat | tacgagatat    | 600  |  |
| agacccgggg  | gccttcagg  | acttgaacaa  | gctggagggtg | ctcattttta | atgacaatct    | 660  |  |
| catcagcacc  | ctacctgcca | acgtgttcca  | gtatgtgccc  | atcaccacc  | tcgacctccg    | 720  |  |
| gggtaacagg  | ctgaaaacgc | tgccttatga  | ggaggctctg  | gagcaaatcc | ctggtatctg    | 780  |  |
| ggagatcctg  | ctagaggata | acccttgggg  | ctgcacctgt  | gatctgctct | ccctgaaaga    | 840  |  |
| atggctggaa  | aacattccca | agaatgcctc  | gatcggcoga  | gtggtctgcg | aagccccac     | 900  |  |
| cagactgcag  | ggtaaagacc | tcaatgaaac  | caccgaacag  | gacttggtgc | ctttgaaaaa    | 960  |  |
| ccgagtggat  | tctagtctcc | cggcgcccc   | tgcccaagaa  | gagacctttg | ctcctggacc    | 1020 |  |
| cctgccaaact | cctttcaaga | caaatagggca | agaggatcat  | gccacaccag | ggctgctctc    | 1080 |  |

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<210> 91

<211> 696

<212> PRT

<213> Homo sapiens

<400> 91

Met Leu Leu Trp Ile Leu Leu Leu Glu Thr Ser Leu Cys Phe Ala Ala  
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Gly Asn Val Thr Gly Asp Val Cys Lys Glu Lys Ile Cys Ser Cys Asn  
 20 25 30

Glu Ile Glu Gly Asp Leu His Val Asp Cys Glu Lys Lys Gly Phe Thr  
 35 40 45

Ser Leu Gln Arg Phe Thr Ala Pro Thr Ser Gln Phe Tyr His Leu Phe  
 50 55 60

Leu His Gly Asn Ser Leu Thr Arg Leu Phe Pro Asn Glu Phe Ala Asn  
 65 70 75 80

Phe Tyr Asn Ala Val Ser Leu His Met Glu Asn Asn Gly Leu His Glu  
 85 90 95

Ile Val Pro Gly Ala Phe Leu Gly Leu Gln Leu Val Lys Arg Leu His  
 100 105 110  
 Ile Asn Asn Asn Lys Ile Lys Ser Phe Arg Lys Gln Thr Phe Leu Gly  
 115 120 125  
 Leu Asp Asp Leu Glu Tyr Leu Gln Ala Asp Phe Asn Leu Leu Arg Asp  
 130 135 140  
 Ile Asp Pro Gly Ala Phe Gln Asp Leu Asn Lys Leu Glu Val Leu Ile  
 145 150 155 160  
 Leu Asn Asp Asn Leu Ile Ser Thr Leu Pro Ala Asn Val Phe Gln Tyr  
 165 170 175  
 Val Pro Ile Thr His Leu Asp Leu Arg Gly Asn Arg Leu Lys Thr Leu  
 180 185 190  
 Pro Tyr Glu Glu Val Leu Glu Gln Ile Pro Gly Ile Ala Glu Ile Leu  
 195 200 205  
 Leu Glu Asp Asn Pro Trp Asp Cys Thr Cys Asp Leu Leu Ser Leu Lys  
 210 215 220  
 Glu Trp Leu Glu Asn Ile Pro Lys Asn Ala Leu Ile Gly Arg Val Val  
 225 230 235 240  
 Cys Glu Ala Pro Thr Arg Leu Gln Gly Lys Asp Leu Asn Glu Thr Thr  
 245 250 255  
 Glu Gln Asp Leu Cys Pro Leu Lys Asn Arg Val Asp Ser Ser Leu Pro  
 260 265 270  
 Ala Pro Pro Ala Gln Glu Glu Thr Phe Ala Pro Gly Pro Leu Pro Thr  
 275 280 285  
 Pro Phe Lys Thr Asn Gly Gln Glu Asp His Ala Thr Pro Gly Ser Ala  
 290 295 300  
 Pro Asn Gly Gly Thr Lys Ile Pro Gly Asn Trp Gln Ile Lys Ile Arg  
 305 310 315 320  
 Pro Thr Ala Ala Ile Ala Thr Gly Ser Ser Arg Asn Lys Pro Leu Ala  
 325 330 335  
 Asn Ser Leu Pro Cys Pro Gly Gly Cys Ser Cys Asp His Ile Pro Gly  
 340 345 350  
 Ser Gly Leu Lys Met Asn Cys Asn Asn Arg Asn Val Ser Ser Leu Ala  
 355 360 365  
 Asp Leu Lys Pro Lys Leu Ser Asn Val Gln Glu Leu Phe Leu Arg Asp  
 370 375 380

090505-0724  
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660 665 670

Trp His Asn Gly Pro Tyr Asn Ala Asp Gly Ala His Arg Val Tyr Asp  
675 680 685

Cys Gly Ser His Ser Leu Ser Asp  
690 695

<210> 92  
<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
oligonucleotide probe

<400> 92  
gttggatctg ggcaacaata ac 22

<210> 93  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
oligonucleotide probe

<400> 93  
attgttgtgc aggctgagtt taag 24

<210> 94  
<211> 45  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
oligonucleotide probe

<400> 94  
ggtggctata catggatagc aattacctgg acacgctgtc ccggg 45

<210> 95  
<211> 2226  
<212> DNA  
<213> Homo sapiens

<400> 95  
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gaggggaagg gaggggaac cgggttgggg aagccagctg tagagggcgg tgaccgcgct 240  
 ccagacacag ctctgcgtcc tcgagcggga cagatccaag ttgggagcag ctctgcgtgc 300  
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 gagaacatgg ccaatcaggg tcgacgagaa gctgggagag acaccacttg tccctgaaca 1320  
 agacaattca gtaacatcta ttccctgagat tccctgatgg ggatcacaga gcacgatgtc 1380  
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 gtctatgggc ccgcggggc tggagagtga tctgagccc gctgctttgg gctccagttc 1680  
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 aggatgggta tactggggga ccgggtagt ctggggagag atattttctt atgtttattc 2040  
 ggagaatttg gagaagtgat tgaacttttc aagacattgg aaacaaatag aacacaatat 2100  
 aatttacatt aaaaaataat ttctaccaa atggaaagga aatgttctat gttgttcagg 2160  
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 gttgat 2226

<210> 96

<211> 490

<212> PRT

<213> Homo sapiens

<400> 96

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Gly Pro Gly Gly Gly Glu His Pro Thr Ala Asp Arg Ala Gly Cys Ser  
 20 25 30

Ala Ser Gly Ala Cys Tyr Ser Leu His His Ala Thr Met Lys Arg Gln  
 35 40 45

Ala Ala Glu Glu Ala Cys Ile Leu Arg Gly Gly Ala Leu Ser Thr Val  
 50 55 60



340 345 350  
 Ser Thr Met Ser Thr Leu Gln Met Ser Leu Gln Ala Glu Ser Lys Ala  
 355 360 365  
 Thr Ile Thr Pro Ser Gly Ser Val Ile Ser Lys Phe Asn Ser Thr Thr  
 370 375 380  
 Ser Ser Ala Thr Pro Gln Ala Phe Asp Ser Ser Ser Ala Val Val Phe  
 385 390 395 400  
 Ile Phe Val Ser Thr Ala Val Val Val Leu Val Ile Leu Thr Met Thr  
 405 410 415  
 Val Leu Gly Leu Val Lys Leu Cys Phe His Glu Ser Pro Ser Ser Gln  
 420 425 430  
 Pro Arg Lys Glu Ser Met Gly Pro Pro Gly Leu Glu Ser Asp Pro Glu  
 435 440 445  
 Pro Ala Ala Leu Gly Ser Ser Ser Ala His Cys Thr Asn Asn Gly Val  
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 Lys Val Gly Asp Cys Asp Leu Arg Asp Arg Ala Glu Gly Ala Leu Leu  
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 Ala Glu Ser Pro Leu Gly Ser Ser Asp Ala  
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<210> 97

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
oligonucleotide probe

<400> 97

tggaaggaga tgcgatgcca cctg

24

<210> 98

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
oligonucleotide probe

<400> 98

tgaccagtgg ggaaggacag

20





&lt;400&gt; 103

```

cggacgcgtg ggattcagca gtggcctgtg gctgccagag cagctcctca ggggaaacta 60
agcgctcgagt cagacggcac cataatcgcc tttaaaagtg cctccgccct gccggccgcg 120
tatcccccggt ctacctgggc cgccccgcgg cggtgcgcgc gtgagagggg ggcgcggggc 180
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tctaaatcaa tgcttaataa aatattttta aaggaaaaaa aaaaaa 2026

```

&lt;210&gt; 104

&lt;211&gt; 415

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 104

```

Met Arg Gly Ala Asn Ala Trp Ala Pro Leu Cys Leu Leu Leu Ala Ala
  1              5              10              15

```

```

Ala Thr Gln Leu Ser Arg Gln Gln Ser Pro Glu Arg Pro Val Phe Thr
      20              25              30

```

```

Cys Gly Gly Ile Leu Thr Gly Glu Ser Gly Phe Ile Gly Ser Glu Gly
      35              40              45

```

```

Phe Pro Gly Val Tyr Pro Pro Asn Ser Lys Cys Thr Trp Lys Ile Thr
      50              55              60

```



|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|     | 340 |     | 345 |     | 350 |     |     |     |     |     |     |     |     |     |     |
| Gly | Lys | Asn | Met | Ser | Ala | Arg | Leu | Thr | Val | Val | Cys | Lys | Gln | Cys | Pro |
|     | 355 |     |     |     |     |     | 360 |     |     |     | 365 |     |     |     |     |
| Leu | Leu | Arg | Arg | Gly | Leu | Asn | Tyr | Ile | Ile | Met | Gly | Gln | Val | Gly | Glu |
|     | 370 |     |     |     |     | 375 |     |     |     |     | 380 |     |     |     |     |
| Asp | Gly | Arg | Gly | Lys | Ile | Met | Pro | Asn | Ser | Phe | Ile | Met | Met | Phe | Lys |
| 385 |     |     |     |     | 390 |     |     |     |     | 395 |     |     |     |     | 400 |
| Thr | Lys | Asn | Gln | Lys | Leu | Leu | Asp | Ala | Leu | Lys | Asn | Lys | Gln | Cys |     |
|     |     |     | 405 |     |     |     |     |     | 410 |     |     |     |     | 415 |     |

&lt;210&gt; 105

&lt;211&gt; 22

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: Synthetic  
oligonucleotide probe

&lt;400&gt; 105

ccgattcata gacctcgaga gt

22

&lt;210&gt; 106

&lt;211&gt; 22

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: Synthetic  
oligonucleotide probe

&lt;400&gt; 106

gtcaaggagt cctccacaat ac

22

&lt;210&gt; 107

&lt;211&gt; 45

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: Synthetic  
oligonucleotide probe

&lt;400&gt; 107

gtgtacaatg gccatgccaa tggccagcgc attggccgct tctgt

45

&lt;210&gt; 108

&lt;211&gt; 1838

&lt;212&gt; DNA

T03T20"9550550





Gly Phe Phe Ser Glu Met Thr Glu Asp Glu Leu Val Val Leu Gln Gln  
 355 360 365

Met Phe Phe Gly Ile Ile Ile Cys Ala Leu Ala Thr Leu Ala Ala Lys  
 370 375 380

Gly Asp Leu Val Phe Thr Ala Ile Phe Ile Gly Ala Val Ala Ala Met  
 385 390 395 400

Thr Gly Tyr Trp Leu Ser Glu Arg Ser Asp Arg Val Leu Glu Gly Phe  
 405 410 415

Ile Lys Gly Arg  
 420

<210> 110

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
 oligonucleotide probe

<400> 110

cctggctatc agcaggtggg ctccaagtgt ctcgatgtgg atgagtgtga 50

<210> 111

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
 oligonucleotide probe

<400> 111

attctgcgtg aacactgagg gc 22

<210> 112

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
 oligonucleotide probe

<400> 112

atctgcttgt agccctcggc ac 22

<210> 113

<211> 1616  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> modified\_base  
 <222> (1461)  
 <223> a, t, c or g

<400> 113  
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 cagcaccatg cagccccctgt ggctctgctg ggcactcttg gtgttgcccc tggccagccc 120  
 cggggccgccc ctgaccgggg agcagctcct gggcagcctg ctgcggcagc tgcagctcaa 180  
 agaggtgccc accctggaca gggccgacat ggaggagctg gtcattccca cccacgtgag 240  
 ggcccagtag gtggccctgc tgcagcgcag ccacggggac cgctcccgcg gaaagaggtt 300  
 cagccagagc ttccgagagg tggccggcag gttcctggcg ttggaggcca gcacacacct 360  
 gctggtgttc ggcattggagc agcggctgcc gcccaacagc gagctggtgc aggcctgct 420  
 gcggtctctc caggagccgg tccccaggc cgcgtgcac aggcacgggc ggctgtcccc 480  
 gcgcagcgcc cgggcccggg tgaccgtcga gtggtgcgc gtccgcgacg acggctccaa 540  
 ccgcacctcc ctcatcgact ccaggctggt gtccgtccac gagagcggct ggaaggcctt 600  
 cgacgtgacc gaggccgtga acttctggca gcagctgagc cggccccggc agccgctgct 660  
 gctacagggtg tcggtgcaga gggagcatct gggcccgtg gcgtccggcg cccacaagct 720  
 ggtccgcttt gcctcgagcagg gggcgccagc cgggcttggg gagccccagc tggagctgca 780  
 caccctggac cttggggact atggagctca gggcgactgt gaccctgaag caccaatgac 840  
 cgagggcacc cgtgctgcc gccaggagat gtacattgac ctgcagggga tgaagtggc 900  
 cgagaactgg gtgctggagc ccccgggctt cctggcttat gagtgtgtgg gcacctgcc 960  
 gcagcccccg gaggccctgg ccttcaagtg gccgtttctg gggcctcgac agtgcctgc 1020  
 ctgggagact gactcgctgc ccattgatcg cagcatcaag gagggaggca ggaccaggcc 1080  
 ccaggtggtc agcctgccc acatgagggt gcagaagtgc agctgtgcct cggatggtgc 1140  
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 ggacaaatgc tctgtgctct ctagttagcc ctgaatttgc ttcctctgac aagttacctc 1320  
 acctaatatt tcttctcag gaatgagaat ctttggccac tggagagccc ttgctcagtt 1380  
 ttctctattc ttattattca ctgcactata ttctaagcac ttacatgtgg agatactgta 1440  
 acctgagggc agaaagccca ntgtgtcatt gtttacttgt cctgtcactg gatctgggct 1500  
 aaagtccctc accaccactc tggacctaa acctgggggt aagtgtgggt tgtgcatccc 1560  
 caatccagat aataaagact ttgtaaaaca tgaataaaac acattttatt ctaaaa 1616

<210> 114  
 <211> 366  
 <212> PRT  
 <213> Homo sapiens

<400> 114  
 Met Gln Pro Leu Trp Leu Cys Trp Ala Leu Trp Val Leu Pro Leu Ala  
 1 5 10 15  
 Ser Pro Gly Ala Ala Leu Thr Gly Glu Gln Leu Leu Gly Ser Leu Leu  
 20 25 30  
 Arg Gln Leu Gln Leu Lys Glu Val Pro Thr Leu Asp Arg Ala Asp Met  
 35 40 45



|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Glu | Glu | Leu | Val | Ile | Pro | Thr | His | Val | Arg | Ala | Gln | Tyr | Val | Ala | Leu |
| 50  |     |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Leu | Gln | Arg | Ser | His | Gly | Asp | Arg | Ser | Arg | Gly | Lys | Arg | Phe | Ser | Gln |
| 65  |     |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |
| Ser | Phe | Arg | Glu | Val | Ala | Gly | Arg | Phe | Leu | Ala | Leu | Glu | Ala | Ser | Thr |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| His | Leu | Leu | Val | Phe | Gly | Met | Glu | Gln | Arg | Leu | Pro | Pro | Asn | Ser | Glu |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Leu | Val | Gln | Ala | Val | Leu | Arg | Leu | Phe | Gln | Glu | Pro | Val | Pro | Lys | Ala |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Ala | Leu | His | Arg | His | Gly | Arg | Leu | Ser | Pro | Arg | Ser | Ala | Arg | Ala | Arg |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Val | Thr | Val | Glu | Trp | Leu | Arg | Val | Arg | Asp | Asp | Gly | Ser | Asn | Arg | Thr |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |
| Ser | Leu | Ile | Asp | Ser | Arg | Leu | Val | Ser | Val | His | Glu | Ser | Gly | Trp | Lys |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |     |
| Ala | Phe | Asp | Val | Thr | Glu | Ala | Val | Asn | Phe | Trp | Gln | Gln | Leu | Ser | Arg |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |
| Pro | Arg | Gln | Pro | Leu | Leu | Leu | Gln | Val | Ser | Val | Gln | Arg | Glu | His | Leu |
|     |     | 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |
| Gly | Pro | Leu | Ala | Ser | Gly | Ala | His | Lys | Leu | Val | Arg | Phe | Ala | Ser | Gln |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |
| Gly | Ala | Pro | Ala | Gly | Leu | Gly | Glu | Pro | Gln | Leu | Glu | Leu | His | Thr | Leu |
| 225 |     |     |     |     | 230 |     |     |     |     | 235 |     |     |     |     | 240 |
| Asp | Leu | Gly | Asp | Tyr | Gly | Ala | Gln | Gly | Asp | Cys | Asp | Pro | Glu | Ala | Pro |
|     |     |     |     | 245 |     |     |     |     | 250 |     |     |     |     | 255 |     |
| Met | Thr | Glu | Gly | Thr | Arg | Cys | Cys | Arg | Gln | Glu | Met | Tyr | Ile | Asp | Leu |
|     |     |     | 260 |     |     |     |     | 265 |     |     |     |     | 270 |     |     |
| Gln | Gly | Met | Lys | Trp | Ala | Glu | Asn | Trp | Val | Leu | Glu | Pro | Pro | Gly | Phe |
|     |     | 275 |     |     |     |     | 280 |     |     |     |     | 285 |     |     |     |
| Leu | Ala | Tyr | Glu | Cys | Val | Gly | Thr | Cys | Arg | Gln | Pro | Pro | Glu | Ala | Leu |
|     | 290 |     |     |     |     | 295 |     |     |     |     | 300 |     |     |     |     |
| Ala | Phe | Lys | Trp | Pro | Phe | Leu | Gly | Pro | Arg | Gln | Cys | Ile | Ala | Ser | Glu |
| 305 |     |     |     |     | 310 |     |     |     |     | 315 |     |     |     |     | 320 |
| Thr | Asp | Ser | Leu | Pro | Met | Ile | Val | Ser | Ile | Lys | Glu | Gly | Gly | Arg | Thr |
|     |     |     |     | 325 |     |     |     |     | 330 |     |     |     |     | 335 |     |

Arg Pro Gln Val Val Ser Leu Pro Asn Met Arg Val Gln Lys Cys Ser  
                   340                  345                  350

Cys Ala Ser Asp Gly Ala Leu Val Pro Arg Arg Leu Gln Pro  
                   355                  360                  365

<210> 115  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
           oligonucleotide probe

<400> 115  
 aggactgccca taacttgccct g 21

<210> 116  
 <211> 22  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
           oligonucleotide probe

<400> 116  
 ataggagttg aagcagcgct gc 22

<210> 117  
 <211> 45  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
           oligonucleotide probe

<400> 117  
 tgtgtggaca tagacgagtg ccgctaccgc tactgccagc accgc 45

<210> 118  
 <211> 1857  
 <212> DNA  
 <213> Homo sapiens

<400> 118  
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 aaggcgcaag tcgagaggaa actgttgtgc ctcttcatat tggcgatcct gttgtgctcc 120  
 ctggcattgg gcagtgttac agtgcactct tctgaacctg aagtcagaat tcttgagaat 180

```

aatcctgtga agttgtcctg tgcctactcg ggcttttctt ctccccgtgt ggagtggaaag 240
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gaggaccggg tgaccttctt gccaaactgg atcaccttca agtccgtgac acgggaagac 360
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gtcaagctca tcgtgcttgt gcctccatcc aagcctacag ttaacatccc ctctctgcc 480
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agctgctcag gagcctggca acaagagcaa aactccagct caaaaaaaaa aaaaaaa 1857

```

<210> 119

<211> 299

<212> PRT

<213> Homo sapiens

<400> 119

```

Met Gly Thr Lys Ala Gln Val Glu Arg Lys Leu Leu Cys Leu Phe Ile
  1                      5                      10                      15

```

```

Leu Ala Ile Leu Leu Cys Ser Leu Ala Leu Gly Ser Val Thr Val His
          20                      25                      30

```

```

Ser Ser Glu Pro Glu Val Arg Ile Pro Glu Asn Asn Pro Val Lys Leu
          35                      40                      45

```

```

Ser Cys Ala Tyr Ser Gly Phe Ser Ser Pro Arg Val Glu Trp Lys Phe
          50                      55                      60

```

```

Asp Gln Gly Asp Thr Thr Arg Leu Val Cys Tyr Asn Asn Lys Ile Thr
          65                      70                      75                      80

```

```

Ala Ser Tyr Glu Asp Arg Val Thr Phe Leu Pro Thr Gly Ile Thr Phe
          85                      90                      95

```

Lys Ser Val Thr Arg Glu Asp Thr Gly Thr Tyr Thr Cys Met Val Ser  
                   100                  105                  110  
 Glu Glu Gly Gly Asn Ser Tyr Gly Glu Val Lys Val Lys Leu Ile Val  
                   115                  120                  125  
 Leu Val Pro Pro Ser Lys Pro Thr Val Asn Ile Pro Ser Ser Ala Thr  
                   130                  135                  140  
 Ile Gly Asn Arg Ala Val Leu Thr Cys Ser Glu Gln Asp Gly Ser Pro  
                   145                  150                  155                  160  
 Pro Ser Glu Tyr Thr Trp Phe Lys Asp Gly Ile Val Met Pro Thr Asn  
                   165                  170                  175  
 Pro Lys Ser Thr Arg Ala Phe Ser Asn Ser Ser Tyr Val Leu Asn Pro  
                   180                  185                  190  
 Thr Thr Gly Glu Leu Val Phe Asp Pro Leu Ser Ala Ser Asp Thr Gly  
                   195                  200                  205  
 Glu Tyr Ser Cys Glu Ala Arg Asn Gly Tyr Gly Thr Pro Met Thr Ser  
                   210                  215                  220  
 Asn Ala Val Arg Met Glu Ala Val Glu Arg Asn Val Gly Val Ile Val  
                   225                  230                  235                  240  
 Ala Ala Val Leu Val Thr Leu Ile Leu Leu Gly Ile Leu Val Phe Gly  
                   245                  250                  255  
 Ile Trp Phe Ala Tyr Ser Arg Gly His Phe Asp Arg Thr Lys Lys Gly  
                   260                  265                  270  
 Thr Ser Ser Lys Lys Val Ile Tyr Ser Gln Pro Ser Ala Arg Ser Glu  
                   275                  280                  285  
 Gly Glu Phe Lys Gln Thr Ser Ser Phe Leu Val  
                   290                  295

<210> 120

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
oligonucleotide probe

<400> 120

tcgcggagct gtgttctgtt tccc

24

<210> 121

<211> 50

09905056-071201



## oligonucleotide probe

<400> 125  
actcagcagt ggtaggaaag

20

<210> 126  
<211> 1210  
<212> DNA  
<213> Homo sapiens

<400> 126  
cagcgcgtgg ccggcgccgc tgtggggaca gcatgagcgg cggttggatg gcgcaggttg 60  
gagcgtggcg aacaggggct ctgggcctgg cgctgctgct gctgctcggc ctcggaactag 120  
gcctggaggc cgccgcgagc ccgctttcca ccccgacctc tgcccaggcc gcaggcccca 180  
gctcaggctc gtgcccaccc accaagttcc agtgccgcac cagtggctta tgcgtgcccc 240  
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ggattgagcc atgtacccag aaagggcaat gcccaccgcc ccctggcctc ccctgcccct 360  
gcaccggcgt cagtgactgc tctgggggaa ctgacaagaa actgcgcaac tgcagccgcc 420  
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ggcgtgcga cggccacca gactgtcccg actccagcga cgagctcggc tgtggaacca 540  
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agtcctctgt gctgtcagaa cagaagacct cgctgccctg aggacaagca cttgccacca 900  
ccgtcactca gccctgggcg tagccggaca ggaggagagc agtgatgcgg atgggtaccc 960  
gggcacacca gccctcagag acctgagttc ttctggccac gtggaacctc gaaccgcagc 1020  
tcctgcagaa gtggccctgg agattgaggg tccttgagca ctccctatgg agatccgggg 1080  
agctaggatg gggaaacctgc cacagccaga actgaggggc tggccccagg cagctcccag 1140  
ggggtagaac ggccctgtgc ttaagacact ccctgctgcc ccgtctgagg gtggcgatta 1200  
aagttgcttc 1210

<210> 127  
<211> 282  
<212> PRT  
<213> Homo sapiens

<400> 127  
Met Ser Gly Gly Trp Met Ala Gln Val Gly Ala Trp Arg Thr Gly Ala  
1 5 10 15  
Leu Gly Leu Ala Leu Leu Leu Leu Gly Leu Gly Leu Gly Leu Glu  
20 25 30  
Ala Ala Ala Ser Pro Leu Ser Thr Pro Thr Ser Ala Gln Ala Ala Gly  
35 40 45  
Pro Ser Ser Gly Ser Cys Pro Pro Thr Lys Phe Gln Cys Arg Thr Ser  
50 55 60  
Gly Leu Cys Val Pro Leu Thr Trp Arg Cys Asp Arg Asp Leu Asp Cys  
65 70 75 80

T02740.950660



<211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
 oligonucleotide probe

<400> 129  
 ttggttccac agccgagctc gtcg 24

<210> 130  
 <211> 50  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
 oligonucleotide probe

<400> 130  
 gaggaggagt gcaggattga gccatgtacc cagaaagggc aatgcccacc 50

<210> 131  
 <211> 1843  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> modified\_base  
 <222> (1837)  
 <223> a, t, c or g

<400> 131  
 cccacgcgtc cggctctcgct cgctcgcgca gcggcggcag cagaggtcgc gcacagatgc 60  
 gggttagact ggcgggggga ggaggcggag gaggggaagga agctgcatgc atgagaccca 120  
 cagactcttg caagctggat gccctctgtg gatgaaagat gtatcatgga atgaaccgga 180  
 gcaatggaga tggatttcta gagcagcagc agcagcagca gcaacctcag tccccccaga 240  
 gactcttggc cgtgatcctg tggtttcagc tggcgctgtg cttcggccct gcacagctca 300  
 cgggcggggt cgtgacactt caagtgtgtg ctgaccccg cttcccgag aatggcttca 360  
 ggacccccag cggagggggt ttctttgaag gctctgtagc ccgatttcac tgccaagacg 420  
 gattcaagct gaaggcgct acaaagagac tgtgtttgaa gcattttaat ggaaccctag 480  
 gctggatccc aagtataat tccatctgtg tgcaagaaga ttgccgtatc cctcaaatac 540  
 aagatgctga gattcataac aagacatata gacatggaga gaagctaata atcacttgct 600  
 atgaaggatt caagatccgg taccgccgac tacacaatat ggtttcatta tgcgcgatg 660  
 atggaacgtg gaataatctg cccatctgtc aaggctgcct gagacctcta gcctcttcta 720  
 atggctatgt aaacatctct gagctccaga cctccttccc ggtggggact gtgatctcct 780  
 atcgtgctt tcccggattt aaacttgatg ggtctgcgta tcttgagtgc ttacaaaacc 840  
 ttatctggtc gtccagccca ccccggtgcc ttgctctgga agcccaagtc tgtccactac 900  
 ctccaatggt gaggcacgga gatttcgtct gccacccgag gccttgtagc cgctacaacc 960  
 acggaactgt ggtggagttt tactgcgacg ctggctacag cctcaccagc gactacaagt 1020  
 acatcacctg ccagtatgga gagggtttc cttcttatca agtctactgc atcaaatcag 1080  
 agcaaacgtg gccagcacc catgagaccc tctgaccac gtggaagatt gtggcggttca 1140



```

cggaaccag tgtgctgctg gtgctgctgc tcgtcatcct ggccaggatg ttccagacca 1200
agttcaaggc ccactttccc ccaggggggc ctccccggag ttccagcagt gaccctgact 1260
ttgtggtggt agacggcgtg cccgtcatgc tcccgtccta tgacgaagct gtgagtggcg 1320
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tggacgacca gagcccccca gcataccccg gctcagggga cacggacaca ggcccagggg 1440
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ctcccagggtg ccaagagagc acccaccctg cttcggacaa ccctgacata attgccagca 1560
cggcagagga ggtggcatcc accagcccag gcatccatca tgcccactgg gtgttggtcc 1620
taagaaactg attgattaaa aaatttccca aagtgtcctg aagtgtctct tcaaatacat 1680
gttgatctgt ggagttgatt cctttccttc tcttggtttt agacaaatgt aaacaaagct 1740
ctgatcctta aaattgctat gctgatagag tggtaggggc tggaagcttg atcaagtcct 1800
gtttcttctt gacacagact gattaaaaat taaaagnaaa aaa 1843

```

<210> 132

<211> 490

<212> PRT

<213> Homo sapiens

<400> 132

```

Met Tyr His Gly Met Asn Pro Ser Asn Gly Asp Gly Phe Leu Glu Gln
  1              5              10              15

Gln Gln Gln Gln Gln Gln Pro Gln Ser Pro Gln Arg Leu Leu Ala Val
      20              25              30

Ile Leu Trp Phe Gln Leu Ala Leu Cys Phe Gly Pro Ala Gln Leu Thr
      35              40              45

Gly Gly Phe Asp Asp Leu Gln Val Cys Ala Asp Pro Gly Ile Pro Glu
      50              55              60

Asn Gly Phe Arg Thr Pro Ser Gly Gly Val Phe Phe Glu Gly Ser Val
      65              70              75              80

Ala Arg Phe His Cys Gln Asp Gly Phe Lys Leu Lys Gly Ala Thr Lys
      85              90              95

Arg Leu Cys Leu Lys His Phe Asn Gly Thr Leu Gly Trp Ile Pro Ser
      100              105              110

Asp Asn Ser Ile Cys Val Gln Glu Asp Cys Arg Ile Pro Gln Ile Glu
      115              120              125

Asp Ala Glu Ile His Asn Lys Thr Tyr Arg His Gly Glu Lys Leu Ile
      130              135              140

Ile Thr Cys His Glu Gly Phe Lys Ile Arg Tyr Pro Asp Leu His Asn
      145              150              155              160

Met Val Ser Leu Cys Arg Asp Asp Gly Thr Trp Asn Asn Leu Pro Ile
      165              170              175

Cys Gln Gly Cys Leu Arg Pro Leu Ala Ser Ser Asn Gly Tyr Val Asn

```



His Ala His Trp Val Leu Phe Leu Arg Asn  
485 490

```
<220>
<223> Description of Artificial Sequence: Synthetic
      oligonucleotide probe
```

```
<210> 134
<211> 23
<212> DNA
<213> Artificial Sequence
```

```
<220>
<223> Description of Artificial Sequence: Synthetic
        oligonucleotide probe
```

```
<400> 134
agccaggatc gcagtaaaac tcc
```

```
<210> 135
<211> 50
<212> DNA
<213> Artificial Sequence
```

<220>  
<223> Description of Artificial Sequence: Synthetic  
oligonucleotide probe

<400> 135  
attttaaactt gatgggtctg cgtatcttga gtgcttaciaa aaccttatct 50

```
<210> 136
<211> 1815
<212> DNA
<213> Homo sapiens
```

|             |            |            |             |             |            |     |  |  |  |  |
|-------------|------------|------------|-------------|-------------|------------|-----|--|--|--|--|
| <400>       | 136        |            |             |             |            |     |  |  |  |  |
| cccacgcgctc | cgctccgcgc | cctccccccc | gcctcccgctg | cggtccgctcg | gtggcctaga | 60  |  |  |  |  |
| gatgctgctg  | ccgcgggttg | agttgtcgcg | ccagcctctg  | cccgcagcc   | cgctccaccg | 120 |  |  |  |  |
| ccgtagcgcg  | cgagtgtcgg | ggggcgcacc | cagctcgggc  | catgaggccg  | ggaaccgcgc | 180 |  |  |  |  |
| tacaggccgt  | gctgctcgcg | gtgctgctgg | tggggctgcg  | ggccgcgacg  | ggtcgcctgc | 240 |  |  |  |  |
| tgaagtgcctc | ggatttggac | ctcagaggag | ggcagccagt  | ctgccgggga  | gggacacaga | 300 |  |  |  |  |





<211> 50  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
 oligonucleotide probe

<400> 138  
 gttcattgaa aacctcttgc catctgatgg tgacttctgg attgggctca 50

<210> 139  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
 oligonucleotide probe

<400> 139  
 aagccaaaga agcctgcagg aggg 24

<210> 140  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
 oligonucleotide probe

<400> 140  
 cagtccaagc ataaagggtcc tggc 24

<210> 141  
 <211> 1514  
 <212> DNA  
 <213> Homo sapiens

<400> 141  
 ggggtctccc tcagggccgg gaggcacagc ggtccctgct tgctgaaggg ctggatgtac 60  
 gcatccgcag gttcccgcgg acttgggggc gcccgctgag ccccggcgcc cgcagaagac 120  
 ttgtgtttgc ctctgcagc ctcaaccggg agggcagcga gggcctacca ccatgatcac 180  
 ttgtgtgttc agcatgcgct tgtggacccc agtgggcgtc ctgacctcgc tggcgtactg 240  
 cctgcaccag cggcgggttg ccctggccga gctgcaggag gccgatggcc agtgtccggt 300  
 cgaccgcagc ctgctgaagt tgaaaatggt gcaggctcgtg tttcgacacg gggctcggag 360  
 tcctctcaag ccgctccgcg tggaggagca ggtagagtgg aacccccagc tattagaggt 420  
 cccaccccaa actcagtttg attacacagt caccaatcta gctggtggtc cgaaaccata 480  
 ttctccttac gactctcaat accatgagac caccctgaag gggggcatgt ttgctgggca 540  
 gctgaccaag gtgggcagtc agcaaagtgt tgccttggga gagagactga ggaagaacta 600  
 tgtggaagac attccctttc tttcaccaac cttcaacca caggaggtct ttattcgttc 660  
 cactaacatt tttcgggaatc tggagtccac ccgttggttg ctggctgggc ttttccagtg 720

```

tcagaaagaa ggacccatca tcatccacac tgatgaagca gattcagaag tcttgtatcc 780
caactaccaa agctgctgga gcctgaggca gagaaccaga ggccggaggc agactgcctc 840
tttacagcca ggaatctcag aggatttgaa aaagggtgaag gacaggatgg gcattgacag 900
tagtgataaa gtggacttct tcatcctcct ggacaacgtg gctgccgagc aggcacacaa 960
cctcccaagc tgcccatgc tgaagagatt tgcacggatg atcgaacaga gagctgtgga 1020
cacatccttg tacatactgc ccaaggaaga cagggaaagt cttcagatgg cagtaggccc 1080
attcctccac atcctagaga gcaacctgct gaaagccatg gactctgcca ctgccccga 1140
caagatcaga aagctgtatc tctatgcggc tcatgatgtg accttcatac cgctcttaat 1200
gaccctgggg atttttgacc acaaattggc accgtttgct gttgacctga ccatggaact 1260
ttaccagcac ctggaatcta aggagtgggt tgtgcagctc tattaccacg ggaaggagca 1320
ggtgccgaga ggttgccctg atgggctctg cccgctggac atgttcttga atgccatgtc 1380
agtttatacc ttaagcccag aaaaatacca tgcactctgc tctcaaactc aggtgatgga 1440
agttggaaat gaagagtaac tgatttataa aagcaggatg tgttgatttt aaaataaagt 1500
gcctttatac aatg 1514

```

<210> 142

<211> 428

<212> PRT

<213> Homo sapiens

<400> 142

```

Met Ile Thr Gly Val Phe Ser Met Arg Leu Trp Thr Pro Val Gly Val
  1                      5                      10                      15

```

```

Leu Thr Ser Leu Ala Tyr Cys Leu His Gln Arg Arg Val Ala Leu Ala
          20                      25                      30

```

```

Glu Leu Gln Glu Ala Asp Gly Gln Cys Pro Val Asp Arg Ser Leu Leu
          35                      40                      45

```

```

Lys Leu Lys Met Val Gln Val Val Phe Arg His Gly Ala Arg Ser Pro
          50                      55                      60

```

```

Leu Lys Pro Leu Pro Leu Glu Glu Gln Val Glu Trp Asn Pro Gln Leu
          65                      70                      75                      80

```

```

Leu Glu Val Pro Pro Gln Thr Gln Phe Asp Tyr Thr Val Thr Asn Leu
          85                      90                      95

```

```

Ala Gly Gly Pro Lys Pro Tyr Ser Pro Tyr Asp Ser Gln Tyr His Glu
          100                      105                      110

```

```

Thr Thr Leu Lys Gly Gly Met Phe Ala Gly Gln Leu Thr Lys Val Gly
          115                      120                      125

```

```

Met Gln Gln Met Phe Ala Leu Gly Glu Arg Leu Arg Lys Asn Tyr Val
          130                      135                      140

```

```

Glu Asp Ile Pro Phe Leu Ser Pro Thr Phe Asn Pro Gln Glu Val Phe
          145                      150                      155                      160

```

```

Ile Arg Ser Thr Asn Ile Phe Arg Asn Leu Glu Ser Thr Arg Cys Leu
          165                      170                      175

```

Leu Ala Gly Leu Phe Gln Cys Gln Lys Glu Gly Pro Ile Ile Ile His  
                   180                  185                  190  
 Thr Asp Glu Ala Asp Ser Glu Val Leu Tyr Pro Asn Tyr Gln Ser Cys  
                   195                  200                  205  
 Trp Ser Leu Arg Gln Arg Thr Arg Gly Arg Arg Gln Thr Ala Ser Leu  
                   210                  215                  220  
 Gln Pro Gly Ile Ser Glu Asp Leu Lys Lys Val Lys Asp Arg Met Gly  
 225                  230                  235                  240  
 Ile Asp Ser Ser Asp Lys Val Asp Phe Phe Ile Leu Leu Asp Asn Val  
                   245                  250                  255  
 Ala Ala Glu Gln Ala His Asn Leu Pro Ser Cys Pro Met Leu Lys Arg  
                   260                  265                  270  
 Phe Ala Arg Met Ile Glu Gln Arg Ala Val Asp Thr Ser Leu Tyr Ile  
                   275                  280                  285  
 Leu Pro Lys Glu Asp Arg Glu Ser Leu Gln Met Ala Val Gly Pro Phe  
                   290                  295                  300  
 Leu His Ile Leu Glu Ser Asn Leu Leu Lys Ala Met Asp Ser Ala Thr  
 305                  310                  315                  320  
 Ala Pro Asp Lys Ile Arg Lys Leu Tyr Leu Tyr Ala Ala His Asp Val  
                   325                  330                  335  
 Thr Phe Ile Pro Leu Leu Met Thr Leu Gly Ile Phe Asp His Lys Trp  
                   340                  345                  350  
 Pro Pro Phe Ala Val Asp Leu Thr Met Glu Leu Tyr Gln His Leu Glu  
                   355                  360                  365  
 Ser Lys Glu Trp Phe Val Gln Leu Tyr Tyr His Gly Lys Glu Gln Val  
                   370                  375                  380  
 Pro Arg Gly Cys Pro Asp Gly Leu Cys Pro Leu Asp Met Phe Leu Asn  
 385                  390                  395                  400  
 Ala Met Ser Val Tyr Thr Leu Ser Pro Glu Lys Tyr His Ala Leu Cys  
                   405                  410                  415  
 Ser Gln Thr Gln Val Met Glu Val Gly Asn Glu Glu  
                   420                  425

&lt;210&gt; 143

&lt;211&gt; 24

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

09505056-07101  
 102120" 95050560



<220>

<223> Description of Artificial Sequence: Synthetic  
oligonucleotide probe

<400> 143

ccaactacca aagctgctgg agcc

24

<210> 144

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
oligonucleotide probe

<400> 144

gcagctctat taccacggga agga

24

<210> 145

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
oligonucleotide probe

<400> 145

tccttcccgt ggtaatagag ctgc

24

<210> 146

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
oligonucleotide probe

<400> 146

ggcagagaac cagaggccgg aggagactgc ctctttacag ccagg

45

<210> 147

<211> 1686

<212> DNA

<213> Homo sapiens

<400> 147

ctcctcttaa catacttgca gctaaaacta aatattgctg cttggggacc tccttctagc 60  
cttaaatttc agctcatcac cttcacctgc cttgggtcatg gctctgctat ttccttgat 120  
ccttgccatt tgcaccagac ctggattcct agcgtctcca tctggagtgc ggctggtggg 180

09905006-07404

```

gggcctccac cgctgtgaag ggcggtgga ggtggaacag aaaggccagt ggggcaccgt 240
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agctgccagc ggaaccccta gtggtathtt gtatgagcca ccagcagaaa aagagcaaaa 360
ggctctcatc caatcagtca gttgcacagg aacagaagat acattggctc agtgtgagca 420
agaagaagtt tatgattggt cacatgatga agatgctggg gcatcgtgtg agaaccaga 480
gagctctttc tccccagtcc cagaggggtg caggctgggt gacggccctg ggcattgcaa 540
gggacgcgtg gaagtgaagc accagaacca gtggtatacc gtgtgccaga caggctggag 600
cctccggggc gcaaagggtg tgtgccggca gctgggatgt gggagggctg tactgactca 660
aaaacgctgc aacaagcatg cctatggcgg aaaacccatc tggctgagcc agatgtcatg 720
ctcaggacga gaagcaaccc ttcaggattg cccttctggt ccttggggga agaacacctg 780
caaccatgat gaagacacgt gggtcgaatg tgaagatccc tttgacttga gactagtagg 840
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atthtggggg tttcacgact gcaccacca ggaagatgtg gctgtcatct gctcagtgtg 1140
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tccacattgc acacagcaga ttcccagcct ccataattgt gtgtatcaac tacttaaata 1440
cattctcaca cacacacaca cacacacaca cacacacaca cacacataca ccatttgtcc 1500
tgthtctctg aagaactctg acaaaatata gattttggta ctgaaagaga ttctagagga 1560
acggaattht aaggataaat tttctgaatt ggthtgggg tttctgaaat tggctctata 1620
atctaattag atataaaatt ctgtaactt tatttacaat aataaagata gcactatgtg 1680
ttcaaa 1686

```

<210> 148

<211> 347

<212> PRT

<213> Homo sapiens

<400> 148

Met Ala Leu Leu Phe Ser Leu Ile Leu Ala Ile Cys Thr Arg Pro Gly  
1 5 10 15

Phe Leu Ala Ser Pro Ser Gly Val Arg Leu Val Gly Gly Leu His Arg  
20 25 30

Cys Glu Gly Arg Val Glu Val Glu Gln Lys Gly Gln Trp Gly Thr Val  
35 40 45

Cys Asp Asp Gly Trp Asp Ile Lys Asp Val Ala Val Leu Cys Arg Glu  
50 55 60

Leu Gly Cys Gly Ala Ala Ser Gly Thr Pro Ser Gly Ile Leu Tyr Glu  
65 70 75 80

Pro Pro Ala Glu Lys Glu Gln Lys Val Leu Ile Gln Ser Val Ser Cys  
85 90 95

Thr Gly Thr Glu Asp Thr Leu Ala Gln Cys Glu Gln Glu Glu Val Tyr  
100 105 110

Asp Cys Ser His Asp Glu Asp Ala Gly Ala Ser Cys Glu Asn Pro Glu  
 115 120 125  
 Ser Ser Phe Ser Pro Val Pro Glu Gly Val Arg Leu Ala Asp Gly Pro  
 130 135 140  
 Gly His Cys Lys Gly Arg Val Glu Val Lys His Gln Asn Gln Trp Tyr  
 145 150 155 160  
 Thr Val Cys Gln Thr Gly Trp Ser Leu Arg Ala Ala Lys Val Val Cys  
 165 170 175  
 Arg Gln Leu Gly Cys Gly Arg Ala Val Leu Thr Gln Lys Arg Cys Asn  
 180 185 190  
 Lys His Ala Tyr Gly Arg Lys Pro Ile Trp Leu Ser Gln Met Ser Cys  
 195 200 205  
 Ser Gly Arg Glu Ala Thr Leu Gln Asp Cys Pro Ser Gly Pro Trp Gly  
 210 215 220  
 Lys Asn Thr Cys Asn His Asp Glu Asp Thr Trp Val Glu Cys Glu Asp  
 225 230 235 240  
 Pro Phe Asp Leu Arg Leu Val Gly Gly Asp Asn Leu Cys Ser Gly Arg  
 245 250 255  
 Leu Glu Val Leu His Lys Gly Val Trp Gly Ser Val Cys Asp Asp Asn  
 260 265 270  
 Trp Gly Glu Lys Glu Asp Gln Val Val Cys Lys Gln Leu Gly Cys Gly  
 275 280 285  
 Lys Ser Leu Ser Pro Ser Phe Arg Asp Arg Lys Cys Tyr Gly Pro Gly  
 290 295 300  
 Val Gly Arg Ile Trp Leu Asp Asn Val Arg Cys Ser Gly Glu Glu Gln  
 305 310 315 320  
 Ser Leu Glu Gln Cys Gln His Arg Phe Trp Gly Phe His Asp Cys Thr  
 325 330 335  
 His Gln Glu Asp Val Ala Val Ile Cys Ser Val  
 340 345

<210> 149

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic

0905056-071291

## oligonucleotide probe

<400> 149  
ttcagctcat caccttcacc tgcc 24

<210> 150  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
oligonucleotide probe

<400> 150  
ggctcataca aaataccact aggg 24

<210> 151  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
oligonucleotide probe

<400> 151  
gggcctccac cgctgtgaag ggcgggtgga ggtggaacag aaaggccagt 50

<210> 152  
<211> 1427  
<212> DNA  
<213> Homo sapiens

<400> 152  
actgcactcg gttctatcga ttgaattccc cggggatcct ctagagatcc ctcgacctcg 60  
accacgcgt ccgcggacgc gtgggcggac gcgtgggccg gctaccagga agagtctgcc 120  
gaagggtgaag gccatggact tcatcacctc cacagccatc ctgccctgc tggtcggctg 180  
cctgggcgtc ttcggcctct tccggctgct gcagtgggtg cgcgggaagg cctacctgcg 240  
gaatgctgtg gtggtgatca caggcgccac ctccagggctg ggcaaagaat gtgcaaaagt 300  
cttctatgct gcgggtgcta aactggtgct ctgtggcccg aatggtgggg ccctagaaga 360  
gctcatcaga gaacttaccg cttctcatgc caccaagggtg cagacacaca agccttactt 420  
ggtgaccttc gacctcacag actctggggc catagtgtga gcagcagctg agatcctgca 480  
gtgctttggc tatgtcgaca tacttgtcaa caatgctggg atcagctacc gtggtaccat 540  
catggacacc acagtggatg tggacaagag ggtcatggag acaaactact ttggcccagt 600  
tgctctaacg aaagcactcc tgccctccat gatcaagagg aggcaaggcc acattgtcgc 660  
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ggtggcccag gatgttcttg ctgctgtggg gaagaagaag aaagatgtga tcctggctga 960  
cttactgcct tccttggtcg tttatcttcg aactctggct cctgggctct tcttcagcct 1020  
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<210> 153

<211> 310

<212> PRT

<213> Homo sapiens

<400> 153

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```

```

Leu Gly Val Phe Gly Leu Phe Arg Leu Leu Gln Trp Val Arg Gly Lys
      20             25             30

```

```

Ala Tyr Leu Arg Asn Ala Val Val Val Ile Thr Gly Ala Thr Ser Gly
      35             40             45

```

```

Leu Gly Lys Glu Cys Ala Lys Val Phe Tyr Ala Ala Gly Ala Lys Leu
      50             55             60

```

```

Val Leu Cys Gly Arg Asn Gly Gly Ala Leu Glu Glu Leu Ile Arg Glu
      65             70             75             80

```

```

Leu Thr Ala Ser His Ala Thr Lys Val Gln Thr His Lys Pro Tyr Leu
      85             90             95

```

```

Val Thr Phe Asp Leu Thr Asp Ser Gly Ala Ile Val Ala Ala Ala Ala
      100            105            110

```

```

Glu Ile Leu Gln Cys Phe Gly Tyr Val Asp Ile Leu Val Asn Asn Ala
      115            120            125

```

```

Gly Ile Ser Tyr Arg Gly Thr Ile Met Asp Thr Thr Val Asp Val Asp
      130            135            140

```

```

Lys Arg Val Met Glu Thr Asn Tyr Phe Gly Pro Val Ala Leu Thr Lys
      145            150            155            160

```

```

Ala Leu Leu Pro Ser Met Ile Lys Arg Arg Gln Gly His Ile Val Ala
      165            170            175

```

```

Ile Ser Ser Ile Gln Gly Lys Met Ser Ile Pro Phe Arg Ser Ala Tyr
      180            185            190

```

```

Ala Ala Ser Lys His Ala Thr Gln Ala Phe Phe Asp Cys Leu Arg Ala
      195            200            205

```

```

Glu Met Glu Gln Tyr Glu Ile Glu Val Thr Val Ile Ser Pro Gly Tyr

```

|   |     |         |
|---|-----|---------|
| 210   | 215 | 220     |
| Ile His Thr Asn Leu Ser Val Asn Ala Ile Thr Ala Asp Gly Ser Arg |     |         |
| 225   | 230 | 235 240 |
| Tyr Gly Val Met Asp Thr Thr Thr Ala Gln Gly Arg Ser Pro Val Glu |     |         |
|   | 245 | 250 255 |
| Val Ala Gln Asp Val Leu Ala Ala Val Gly Lys Lys Lys Lys Asp Val |     |         |
|   | 260 | 265 270 |
| Ile Leu Ala Asp Leu Leu Pro Ser Leu Ala Val Tyr Leu Arg Thr Leu |     |         |
|   | 275 | 280 285 |
| Ala Pro Gly Leu Phe Phe Ser Leu Met Ala Ser Arg Ala Arg Lys Glu |     |         |
|   | 290 | 300     |

Arg Lys Ser Lys Asn Ser  
305 310

<210> 154

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
oligonucleotide probe

<400> 154

ggtgctaaac tggtgctctg tggc

24

<210> 155

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
oligonucleotide probe

<400> 155

cagggcaaga tgagcattcc

20

<210> 156

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
oligonucleotide probe

<400> 156  
tcatactgtt ccatactcggc acgc 24

<210> 157

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
oligonucleotide probe

<400> 157  
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<210> 158

<211> 1771

<212> DNA

<213> Homo sapiens

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<210> 159

<211> 300  
 <212> PRT  
 <213> Homo sapiens

<400> 159

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Lys | Phe | Leu | Leu | Asp | Ile | Leu | Leu | Leu | Leu | Pro | Leu | Leu | Ile | Val |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Cys | Ser | Leu | Glu | Ser | Phe | Val | Lys | Leu | Phe | Ile | Pro | Lys | Arg | Arg | Lys |
|     |     | 20  |     |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Ser | Val | Thr | Gly | Glu | Ile | Val | Leu | Ile | Thr | Gly | Ala | Gly | His | Gly | Ile |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Gly | Arg | Leu | Thr | Ala | Tyr | Glu | Phe | Ala | Lys | Leu | Lys | Ser | Lys | Leu | Val |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Leu | Trp | Asp | Ile | Asn | Lys | His | Gly | Leu | Glu | Glu | Thr | Ala | Ala | Lys | Cys |
|     | 65  |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |
| Lys | Gly | Leu | Gly | Ala | Lys | Val | His | Thr | Phe | Val | Val | Asp | Cys | Ser | Asn |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Arg | Glu | Asp | Ile | Tyr | Ser | Ser | Ala | Lys | Lys | Val | Lys | Ala | Glu | Ile | Gly |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Asp | Val | Ser | Ile | Leu | Val | Asn | Asn | Ala | Gly | Val | Val | Tyr | Thr | Ser | Asp |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Leu | Phe | Ala | Thr | Gln | Asp | Pro | Gln | Ile | Glu | Lys | Thr | Phe | Glu | Val | Asn |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Val | Leu | Ala | His | Phe | Trp | Thr | Thr | Lys | Ala | Phe | Leu | Pro | Ala | Met | Thr |
|     | 145 |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |
| Lys | Asn | Asn | His | Gly | His | Ile | Val | Thr | Val | Ala | Ser | Ala | Ala | Gly | His |
|     |     |     | 165 |     |     |     |     | 170 |     |     |     |     |     | 175 |     |
| Val | Ser | Val | Pro | Phe | Leu | Leu | Ala | Tyr | Cys | Ser | Ser | Lys | Phe | Ala | Ala |
|     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |     |     |
| Val | Gly | Phe | His | Lys | Thr | Leu | Thr | Asp | Glu | Leu | Ala | Ala | Leu | Gln | Ile |
|     | 195 |     |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |
| Thr | Gly | Val | Lys | Thr | Thr | Cys | Leu | Cys | Pro | Asn | Phe | Val | Asn | Thr | Gly |
|     | 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |
| Phe | Ile | Lys | Asn | Pro | Ser | Thr | Ser | Leu | Gly | Pro | Thr | Leu | Glu | Pro | Glu |
|     | 225 |     |     |     | 230 |     |     |     |     | 235 |     |     |     |     | 240 |
| Glu | Val | Val | Asn | Arg | Leu | Met | His | Gly | Ile | Leu | Thr | Glu | Gln | Lys | Met |
|     |     |     | 245 |     |     |     |     | 250 |     |     |     |     |     | 255 |     |

09905056-07204



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<210> 164

<211> 476

<212> PRT

<213> Homo sapiens

<400> 164

Met Val Gly Ala Met Trp Lys Val Ile Val Ser Leu Val Leu Leu Met  
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Pro Gly Pro Cys Asp Gly Leu Phe Arg Ser Leu Tyr Arg Ser Val Ser  
20 25 30

Met Pro Pro Lys Gly Asp Ser Gly Gln Pro Leu Phe Leu Thr Pro Tyr  
35 40 45

Ile Glu Ala Gly Lys Ile Gln Lys Gly Arg Glu Leu Ser Leu Val Gly  
50 55 60

Pro Phe Pro Gly Leu Asn Met Lys Ser Tyr Ala Gly Phe Leu Thr Val

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| 65  |     |     |     | 70  |     |     |     | 75  |     |     |     | 80  |     |     |     |  |
| Asn | Lys | Thr | Tyr | Asn | Ser | Asn | Leu | Phe | Phe | Trp | Phe | Phe | Pro | Ala | Gln |  |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     | 95  |     |     |  |
| Ile | Gln | Pro | Glu | Asp | Ala | Pro | Val | Val | Leu | Trp | Leu | Gln | Gly | Gly | Pro |  |
|     |     |     |     | 100 |     |     |     |     | 105 |     |     |     | 110 |     |     |  |
| Gly | Gly | Ser | Ser | Met | Phe | Gly | Leu | Phe | Val | Glu | His | Gly | Pro | Tyr | Val |  |
|     |     |     |     | 115 |     |     |     |     | 120 |     |     |     | 125 |     |     |  |
| Val | Thr | Ser | Asn | Met | Thr | Leu | Arg | Asp | Arg | Asp | Phe | Pro | Trp | Thr | Thr |  |
|     |     |     |     | 130 |     |     |     |     | 135 |     |     |     | 140 |     |     |  |
| Thr | Leu | Ser | Met | Leu | Tyr | Ile | Asp | Asn | Pro | Val | Gly | Thr | Gly | Phe | Ser |  |
| 145 |     |     |     |     | 150 |     |     |     | 155 |     |     |     | 160 |     |     |  |
| Phe | Thr | Asp | Asp | Thr | His | Gly | Tyr | Ala | Val | Asn | Glu | Asp | Asp | Val | Ala |  |
|     |     |     |     | 165 |     |     |     |     | 170 |     |     |     | 175 |     |     |  |
| Arg | Asp | Leu | Tyr | Ser | Ala | Leu | Ile | Gln | Phe | Phe | Gln | Ile | Phe | Pro | Glu |  |
|     |     |     |     | 180 |     |     |     |     | 185 |     |     |     | 190 |     |     |  |
| Tyr | Lys | Asn | Asn | Asp | Phe | Tyr | Val | Thr | Gly | Glu | Ser | Tyr | Ala | Gly | Lys |  |
|     |     |     |     | 195 |     |     |     |     | 200 |     |     |     | 205 |     |     |  |
| Tyr | Val | Pro | Ala | Ile | Ala | His | Leu | Ile | His | Ser | Leu | Asn | Pro | Val | Arg |  |
|     |     |     |     | 210 |     |     |     |     | 215 |     |     |     | 220 |     |     |  |
| Glu | Val | Lys | Ile | Asn | Leu | Asn | Gly | Ile | Ala | Ile | Gly | Asp | Gly | Tyr | Ser |  |
| 225 |     |     |     |     | 230 |     |     |     | 235 |     |     |     | 240 |     |     |  |
| Asp | Pro | Glu | Ser | Ile | Ile | Gly | Gly | Tyr | Ala | Glu | Phe | Leu | Tyr | Gln | Ile |  |
|     |     |     |     | 245 |     |     |     |     | 250 |     |     |     | 255 |     |     |  |
| Gly | Leu | Leu | Asp | Glu | Lys | Gln | Lys | Lys | Tyr | Phe | Gln | Lys | Gln | Cys | His |  |
|     |     |     |     | 260 |     |     |     |     | 265 |     |     |     | 270 |     |     |  |
| Glu | Cys | Ile | Glu | His | Ile | Arg | Lys | Gln | Asn | Trp | Phe | Glu | Ala | Phe | Glu |  |
|     |     |     |     | 275 |     |     |     |     | 280 |     |     |     | 285 |     |     |  |
| Ile | Leu | Asp | Lys | Leu | Leu | Asp | Gly | Asp | Leu | Thr | Ser | Asp | Pro | Ser | Tyr |  |
|     |     |     |     | 290 |     |     |     |     | 295 |     |     |     | 300 |     |     |  |
| Phe | Gln | Asn | Val | Thr | Gly | Cys | Ser | Asn | Tyr | Tyr | Asn | Phe | Leu | Arg | Cys |  |
| 305 |     |     |     |     | 310 |     |     |     | 315 |     |     |     | 320 |     |     |  |
| Thr | Glu | Pro | Glu | Asp | Gln | Leu | Tyr | Tyr | Val | Lys | Phe | Leu | Ser | Leu | Pro |  |
|     |     |     |     | 325 |     |     |     |     | 330 |     |     |     | 335 |     |     |  |
| Glu | Val | Arg | Gln | Ala | Ile | His | Val | Gly | Asn | Gln | Thr | Phe | Asn | Asp | Gly |  |
|     |     |     |     | 340 |     |     |     |     | 345 |     |     |     | 350 |     |     |  |

Thr Ile Val Glu Lys Tyr Leu Arg Glu Asp Thr Val Gln Ser Val Lys  
 355 360 365

Pro Trp Leu Thr Glu Ile Met Asn Asn Tyr Lys Val Leu Ile Tyr Asn  
 370 375 380

Gly Gln Leu Asp Ile Ile Val Ala Ala Ala Leu Thr Glu Arg Ser Leu  
 385 390 395 400

Met Gly Met Asp Trp Lys Gly Ser Gln Glu Tyr Lys Lys Ala Glu Lys  
 405 410 415

Lys Val Trp Lys Ile Phe Lys Ser Asp Ser Glu Val Ala Gly Tyr Ile  
 420 425 430

Arg Gln Ala Gly Asp Phe His Gln Val Ile Ile Arg Gly Gly Gly His  
 435 440 445

Ile Leu Pro Tyr Asp Gln Pro Leu Arg Ala Phe Asp Met Ile Asn Arg  
 450 455 460

Phe Ile Tyr Gly Lys Gly Trp Asp Pro Tyr Val Gly  
 465 470 475

<210> 165

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
 oligonucleotide probe

<400> 165

ttccatgccca cctaaggag actc

24

<210> 166

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
 oligonucleotide probe

<400> 166

tggatgaggt gtgcaatggc tggc

24

<210> 167

<211> 24

<212> DNA

<213> Artificial Sequence

0905056-07301

<220>

<223> Description of Artificial Sequence: Synthetic  
oligonucleotide probe

<400> 167

agctctcaga ggctggatcat aggg

24

<210> 168

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
oligonucleotide probe

<400> 168

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50

<210> 169

<211> 2477

<212> DNA

<213> Homo sapiens

<400> 169

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aaggatgacc ccaagttcca ctcatactgt tccctgacct tcggctgcac ccgggccggg 1740  
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gccttcaata tcaccagcca ggacgatgta ctctttgcca tcttctccaa agggcagaag 1860  
cagtatcacc acccgcccga tgactctgcc ctgtgtgect tccctatccg ggccatcaac 1920  
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tggctgctgg ggaaggacgt ccagtgcacg aaggcgcctg tccccatcga tgataacttc 2040  
tgtggactgg acatcaacca gccctggga ggctcaactc cagtggaggg cctgacctg 2100  
tacaccacca gcagggaccg catgacctct gtggcctcct acgtttacaa cggtacacg 2160  
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tgctccaatg ccattcacct cctcagcaaa gagtccctct tggaaggtag ctattggtgg 2280  
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aggggttaat tttgtgactt agcttctagc tacttctcc agccatcagt cattgggtat 2400  
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acatctgcaa aagcaaa 2477

<210> 170

<211> 552

<212> PRT

<213> Homo sapiens

<400> 170

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Gly | Thr | Leu | Gly | Gln | Ala | Ser | Leu | Phe | Ala | Pro | Pro | Gly | Asn | Tyr |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |     |
| Phe | Trp | Ser | Asp | His | Ser | Ala | Leu | Cys | Phe | Ala | Glu | Ser | Cys | Glu | Gly |
|     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |     |     |
| Gln | Pro | Gly | Lys | Val | Glu | Gln | Met | Ser | Thr | His | Arg | Ser | Arg | Leu | Leu |
|     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |     |     |     |
| Thr | Ala | Ala | Pro | Leu | Ser | Met | Glu | Gln | Arg | Gln | Pro | Trp | Pro | Arg | Ala |
|     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |     |     |     |     |
| Leu | Glu | Val | Asp | Ser | Arg | Ser | Val | Val | Leu | Leu | Ser | Val | Val | Trp | Val |
|     | 65  |     |     |     | 70  |     |     |     |     | 75  |     |     |     |     | 80  |
| Leu | Leu | Ala | Pro | Pro | Ala | Ala | Gly | Met | Pro | Gln | Phe | Ser | Thr | Phe | His |
|     |     |     |     | 85  |     |     |     |     | 90  |     |     |     |     | 95  |     |
| Ser | Glu | Asn | Arg | Asp | Trp | Thr | Phe | Asn | His | Leu | Thr | Val | His | Gln | Gly |
|     |     |     | 100 |     |     |     |     | 105 |     |     |     |     | 110 |     |     |
| Thr | Gly | Ala | Val | Tyr | Val | Gly | Ala | Ile | Asn | Arg | Val | Tyr | Lys | Leu | Thr |
|     |     | 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |
| Gly | Asn | Leu | Thr | Ile | Gln | Val | Ala | His | Lys | Thr | Gly | Pro | Glu | Glu | Asp |
|     | 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |
| Asn | Lys | Ser | Arg | Tyr | Pro | Pro | Leu | Ile | Val | Gln | Pro | Cys | Ser | Glu | Val |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     | 160 |     |
| Leu | Thr | Leu | Thr | Asn | Asn | Val | Asn | Lys | Leu | Leu | Ile | Ile | Asp | Tyr | Ser |
|     |     |     |     | 165 |     |     |     | 170 |     |     |     |     |     | 175 |     |

09905056-04301

Glu Asn Arg Leu Leu Ala Cys Gly Ser Leu Tyr Gln Gly Val Cys Lys  
 180 185 190  
 Leu Leu Arg Leu Asp Asp Leu Phe Ile Leu Val Glu Pro Ser His Lys  
 195 200 205  
 Lys Glu His Tyr Leu Ser Ser Val Asn Lys Thr Gly Thr Met Tyr Gly  
 210 215 220  
 Val Ile Val Arg Ser Glu Gly Glu Asp Gly Lys Leu Phe Ile Gly Thr  
 225 230 235 240  
 Ala Val Asp Gly Lys Gln Asp Tyr Phe Pro Thr Leu Ser Ser Arg Lys  
 245 250 255  
 Leu Pro Arg Asp Pro Glu Ser Ser Ala Met Leu Asp Tyr Glu Leu His  
 260 265 270  
 Ser Asp Phe Val Ser Ser Leu Ile Lys Ile Pro Ser Asp Thr Leu Ala  
 275 280 285  
 Leu Val Ser His Phe Asp Ile Phe Tyr Ile Tyr Gly Phe Ala Ser Gly  
 290 295 300  
 Gly Phe Val Tyr Phe Leu Thr Val Gln Pro Glu Thr Pro Glu Gly Val  
 305 310 315 320  
 Ala Ile Asn Ser Ala Gly Asp Leu Phe Tyr Thr Ser Arg Ile Val Arg  
 325 330 335  
 Leu Cys Lys Asp Asp Pro Lys Phe His Ser Tyr Val Ser Leu Pro Phe  
 340 345 350  
 Gly Cys Thr Arg Ala Gly Val Glu Tyr Arg Leu Leu Gln Ala Ala Tyr  
 355 360 365  
 Leu Ala Lys Pro Gly Asp Ser Leu Ala Gln Ala Phe Asn Ile Thr Ser  
 370 375 380  
 Gln Asp Asp Val Leu Phe Ala Ile Phe Ser Lys Gly Gln Lys Gln Tyr  
 385 390 395 400  
 His His Pro Pro Asp Asp Ser Ala Leu Cys Ala Phe Pro Ile Arg Ala  
 405 410 415  
 Ile Asn Leu Gln Ile Lys Glu Arg Leu Gln Ser Cys Tyr Gln Gly Glu  
 420 425 430  
 Gly Asn Leu Glu Leu Asn Trp Leu Leu Gly Lys Asp Val Gln Cys Thr  
 435 440 445  
 Lys Ala Pro Val Pro Ile Asp Asp Asn Phe Cys Gly Leu Asp Ile Asn

0906056-071201  
 0906056-071201

450                      455                      460  
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 465                      470                      475                      480  
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                     485                      490                      495  
 Tyr Ser Val Val Phe Val Gly Thr Lys Ser Gly Lys Leu Lys Lys Val  
                     500                      505                      510  
 Arg Val Tyr Glu Phe Arg Cys Ser Asn Ala Ile His Leu Leu Ser Lys  
                     515                      520                      525  
 Glu Ser Leu Leu Glu Gly Ser Tyr Trp Trp Arg Phe Asn Tyr Arg Gln  
                     530                      535                      540  
 Leu Tyr Phe Leu Gly Glu Gln Arg  
 545                      550

<210> 171

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
oligonucleotide probe

<400> 171

tggaataaccg cctcctgcag

20

<210> 172

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
oligonucleotide probe

<400> 172

cttctgccct ttggagaaga tggc

24

<210> 173

<211> 43

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
oligonucleotide probe

FOOTNOTES: 01.001



<400> 173  
ggactcactg gccagggcct tcaatatcac cagccaggac gat 42

<210> 174  
<211> 3106  
<212> DNA  
<213> Homo sapiens

<220>  
<221> modified\_base  
<222> (1683)  
<223> a, t, c or g

<400> 174  
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aacacgcgat gaccacgtgg agcctccggc ggaggccggc ccgcacgctg ggactcctgc 120  
tgetggctgt cttgggcttc ctgggtctcc gcaggctgga ctggagcacc ctggctccctc 180  
tgcggtcccg ccacgcacag ctggggctgc aggccaaagg ctggaacttc atgctggagg 240  
attccacctt ctggatcttc gggggctcca tccactattt ccgtgtgccc agggagtact 300  
ggagggaccg cctgctgaag atgaaggcct gtggcttgaa caccctcacc acctatgttc 360  
cgtggaacct gcatgagcca gaaagaggca aatttgactt ctctgggaac ctggacctgg 420  
aggccttcgt cctgatggcc gcagagatcg ggctgtgggt gattctgctg ccaggccctc 480  
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gccctgcatt acagttcacg gaaaccccc acctgggcag gaaccagtac attaagttag 1980  
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aggctgtcgg gctgtctcta ggtgaggagc agctaatac atcgccagc ctttggccct 2280

```

cagaaaaagt gctgaaacgt gcccttgac cggacgtcac agccctgcga gcatctgctg 2340
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gaagtgtgtc caagtccgca tttgagcctt gttctggggc ccagcccaac acctggcttg 3060
ggctcactgt cctgagttgc agtaaagcta taaccttgaa tcacaa 3106

```

<210> 175

<211> 636

<212> PRT

<213> Homo sapiens

<220>

<221> MOD\_RES

<222> (539)

<223> Any amino acid

<400> 175

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Met Thr Thr Trp Ser Leu Arg Arg Arg Pro Ala Arg Thr Leu Gly Leu
 1             5             10             15

```

```

Leu Leu Leu Val Val Leu Gly Phe Leu Val Leu Arg Arg Leu Asp Trp
          20             25             30

```

```

Ser Thr Leu Val Pro Leu Arg Leu Arg His Arg Gln Leu Gly Leu Gln
          35             40             45

```

```

Ala Lys Gly Trp Asn Phe Met Leu Glu Asp Ser Thr Phe Trp Ile Phe
          50             55             60

```

```

Gly Gly Ser Ile His Tyr Phe Arg Val Pro Arg Glu Tyr Trp Arg Asp
          65             70             75             80

```

```

Arg Leu Leu Lys Met Lys Ala Cys Gly Leu Asn Thr Leu Thr Thr Tyr
          85             90             95

```

```

Val Pro Trp Asn Leu His Glu Pro Glu Arg Gly Lys Phe Asp Phe Ser
          100            105            110

```

```

Gly Asn Leu Asp Leu Glu Ala Phe Val Leu Met Ala Ala Glu Ile Gly
          115            120            125

```

```

Leu Trp Val Ile Leu Arg Pro Gly Pro Tyr Ile Cys Ser Glu Met Asp
          130            135            140

```

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Tyr Glu Thr Ser Ile Thr Ser Ser Gly Ile Leu Ser Gly His Val His  
435 440 445

Asp Arg Gly Gln Val Phe Val Asn Thr Val Ser Ile Gly Phe Leu Asp  
450 455 460

Tyr Lys Thr Thr Lys Ile Ala Val Pro Leu Ile Gln Gly Tyr Thr Val  
465 470 475 480

Leu Arg Ile Leu Val Glu Asn Arg Gly Arg Val Asn Tyr Gly Glu Asn  
485 490 495

Ile Asp Asp Gln Arg Lys Gly Leu Ile Gly Asn Leu Tyr Leu Asn Asp  
500 505 510

Ser Pro Leu Lys Asn Phe Arg Ile Tyr Ser Leu Asp Met Lys Lys Ser  
515 520 525

Phe Phe Gln Arg Phe Gly Leu Asp Lys Trp Xaa Ser Leu Pro Glu Thr  
530 535 540

Pro Thr Leu Pro Ala Phe Phe Leu Gly Ser Leu Ser Ile Ser Ser Thr  
545 550 555 560

Pro Cys Asp Thr Phe Leu Lys Leu Glu Gly Trp Glu Lys Gly Val Val  
565 570 575

Phe Ile Asn Gly Gln Asn Leu Gly Arg Tyr Trp Asn Ile Gly Pro Gln  
580 585 590

Lys Thr Leu Tyr Leu Pro Gly Pro Trp Leu Ser Ser Gly Ile Asn Gln  
595 600 605

Val Ile Val Phe Glu Glu Thr Met Ala Gly Pro Ala Leu Gln Phe Thr  
610 615 620

Glu Thr Pro His Leu Gly Arg Asn Gln Tyr Ile Lys  
625 630 635

<210> 176

<211> 2505

<212> DNA

<213> Homo sapiens

<400> 176

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ccctgggtgag gggtctctac ttggccttcg gtgggggtca agacgcaggc acctacgcca 120  
aaggggagca aagccgggct cggcccaggg cccccaggac ctccatctcc caatgttgga 180  
ggaatccgac acgtgacggg ctgtccgcgg tctcagacta gaggagcgct gtaaacgcca 240  
tggtctccaa gaagctgtcc tgccttcggt ccctgctgct gccgctcagc ctgacgctac 300  
tgctgcccc a ggcagacact cggtcgttcg tagtggatag gggtcacgac cggtttctcc 360  
tagacggggc cccgttcgcg tatgtgtctg gcagcctgca ctactttcgg gtaccgcggg 420

tgctttgggc cgaccggctt ttgaagatgc gatggagcgg cctcaacgcc atacagtttt 480  
 atgtgccctg gaactaccac gagccacagc ctgggggtcta taactttaat ggagccggg 540  
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 gaccttacat ctgtgcagag tgggagatgg ggggtctccc atcctgggtg cttcgaaaac 660  
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 cccataccat ttttgagcca acaccattct gggtgccaaa taatggagtc catgaccgtg 1560  
 cctatgtgat ggtggatggg gtgttccagg gtgttgtgga gcgaaatat agagacaaac 1620  
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<210> 177

<211> 654

<212> PRT

<213> Homo sapiens

<400> 177

Met Ala Pro Lys Lys Leu Ser Cys Leu Arg Ser Leu Leu Leu Pro Leu  
 1 5 10 15

Ser Leu Thr Leu Leu Leu Pro Gln Ala Asp Thr Arg Ser Phe Val Val  
 20 25 30

Asp Arg Gly His Asp Arg Phe Leu Leu Asp Gly Ala Pro Phe Arg Tyr  
 35 40 45

Val Ser Gly Ser Leu His Tyr Phe Arg Val Pro Arg Val Leu Trp Ala  
 50 55 60

Asp Arg Leu Leu Lys Met Arg Trp Ser Gly Leu Asn Ala Ile Gln Phe  
 65 70 75 80  
 Tyr Val Pro Trp Asn Tyr His Glu Pro Gln Pro Gly Val Tyr Asn Phe  
 85 90 95  
 Asn Gly Ser Arg Asp Leu Ile Ala Phe Leu Asn Glu Ala Ala Leu Ala  
 100 105 110  
 Asn Leu Leu Val Ile Leu Arg Pro Gly Pro Tyr Ile Cys Ala Glu Trp  
 115 120 125  
 Glu Met Gly Gly Leu Pro Ser Trp Leu Leu Arg Lys Pro Glu Ile His  
 130 135 140  
 Leu Arg Thr Ser Asp Pro Asp Phe Leu Ala Ala Val Asp Ser Trp Phe  
 145 150 155 160  
 Lys Val Leu Leu Pro Lys Ile Tyr Pro Trp Leu Tyr His Asn Gly Gly  
 165 170 175  
 Asn Ile Ile Ser Ile Gln Val Glu Asn Glu Tyr Gly Ser Tyr Arg Ala  
 180 185 190  
 Cys Asp Phe Ser Tyr Met Arg His Leu Ala Gly Leu Phe Arg Ala Leu  
 195 200 205  
 Leu Gly Glu Lys Ile Leu Leu Phe Thr Thr Asp Gly Pro Glu Gly Leu  
 210 215 220  
 Lys Cys Gly Ser Leu Arg Gly Leu Tyr Thr Thr Val Asp Phe Gly Pro  
 225 230 235 240  
 Ala Asp Asn Met Thr Lys Ile Phe Thr Leu Leu Arg Lys Tyr Glu Pro  
 245 250 255  
 His Gly Pro Leu Val Asn Ser Glu Tyr Tyr Thr Gly Trp Leu Asp Tyr  
 260 265 270  
 Trp Gly Gln Asn His Ser Thr Arg Ser Val Ser Ala Val Thr Lys Gly  
 275 280 285  
 Leu Glu Asn Met Leu Lys Leu Gly Ala Ser Val Asn Met Tyr Met Phe  
 290 295 300  
 His Gly Gly Thr Asn Phe Gly Tyr Trp Asn Gly Ala Asp Lys Lys Gly  
 305 310 315 320  
 Arg Phe Leu Pro Ile Thr Thr Ser Tyr Asp Tyr Asp Ala Pro Ile Ser  
 325 330 335  
 Glu Ala Gly Asp Pro Thr Pro Lys Leu Phe Ala Leu Arg Asp Val Ile

00905056 07.1201  
 102720 95050500



Asp Thr Leu Ser Ala Ser Glu Pro Met Glu Leu Ser Gly His  
645 650

```
<210> 178
<211> 24
<212> DNA
<213> Artificial Sequence
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<220>  
<223> Description of Artificial Sequence: Synthetic oligonucleotide probe

<400> 178  
tggctactcc aagacctgg catg 24

```
<210> 179
<211> 24
<212> DNA
<213> Artificial Sequence
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<220>  
<223> Description of Artificial Sequence: Synthetic oligonucleotide probe

<400> 179  
tggacaaatc cccttqctca gccc 24

```
<210> 180
<211> 50
<212> DNA
<213> Artificial Sequence
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<220>  
<223> Description of Artificial Sequence: Synthetic  
oligonucleotide probe

<400> 180  
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<210> 181
<211> 22
<212> DNA
<213> Artificial Sequence
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<220>  
<223> Description of Artificial Sequence: Synthetic  
oligonucleotide probe

<400> 181  
ccagctatga ctatgatgca cc 22



<210> 182  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
 oligonucleotide probe

<400> 182  
 tggcaccag aatggtgtg gctc 24

<210> 183  
 <211> 50  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
 oligonucleotide probe

<400> 183  
 cgagatgtca tcagcaagtt ccaggaagtt cctttgggac ctttacctcc 50

<210> 184  
 <211> 1947  
 <212> DNA  
 <213> Homo sapiens

<400> 184  
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<213> Homo sapiens

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Phe Ser Asp Ile Pro Asp Val Lys Asn Asp Phe Ala Phe Leu Leu His  
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Met Val Asp Gln Tyr Asp Gln Leu Tyr Ser Lys Arg Phe Gly Val Phe  
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Glu Trp Thr Phe Glu Lys Leu Arg Gln His Ile Ser Arg Asn Ala Gln  
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<211> 607

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| Cys        | Leu        | Ala        | Glu<br>20  | Leu        | Thr        | Met        | Ala        | Glu<br>25  | Ala        | Glu        | Gly        | Asn        | Ala<br>30  | Ser        | Cys        |
| Thr        | Val        | Ser<br>35  | Leu        | Gly        | Gly        | Ala        | Asn<br>40  | Met        | Ala        | Glu        | Thr        | His<br>45  | Lys        | Ala        | Met        |
| Ile        | Leu<br>50  | Gln        | Leu        | Asn        | Pro        | Ser<br>55  | Glu        | Asn        | Cys        | Thr        | Trp<br>60  | Thr        | Ile        | Glu        | Arg        |
| Pro<br>65  | Glu        | Asn        | Lys        | Ser        | Ile<br>70  | Arg        | Ile        | Ile        | Phe        | Ser<br>75  | Tyr        | Val        | Gln        | Leu        | Asp<br>80  |
| Pro        | Asp        | Gly        | Ser        | Cys<br>85  | Glu        | Ser        | Glu        | Asn        | Ile<br>90  | Lys        | Val        | Phe        | Asp        | Gly<br>95  | Thr        |
| Ser        | Ser        | Asn        | Gly<br>100 | Pro        | Leu        | Leu        | Gly        | Gln<br>105 | Val        | Cys        | Ser        | Lys        | Asn<br>110 | Asp        | Tyr        |
| Val        | Pro<br>115 | Val        | Phe        | Glu        | Ser        | Ser        | Ser<br>120 | Ser        | Thr        | Leu        | Thr        | Phe<br>125 | Gln        | Ile        | Val        |
| Thr<br>130 | Asp        | Ser        | Ala        | Arg        | Ile        | Gln<br>135 | Arg        | Thr        | Val        | Phe        | Val<br>140 | Phe        | Tyr        | Tyr        | Phe        |
| Phe<br>145 | Ser        | Pro        | Asn        | Ile        | Ser<br>150 | Ile        | Pro        | Asn        | Cys        | Gly<br>155 | Gly        | Tyr        | Leu        | Asp        | Thr<br>160 |
| Leu        | Glu        | Gly        | Ser        | Phe<br>165 | Thr        | Ser        | Pro        | Asn        | Tyr<br>170 | Pro        | Lys        | Pro        | His        | Pro<br>175 | Glu        |
| Leu        | Ala        | Tyr        | Cys<br>180 | Val        | Trp        | His        | Ile        | Gln<br>185 | Val        | Glu        | Lys        | Asp        | Tyr<br>190 | Lys        | Ile        |
| Lys        | Leu        | Asn<br>195 | Phe        | Lys        | Glu        | Ile        | Phe<br>200 | Leu        | Glu        | Ile        | Asp        | Lys<br>205 | Gln        | Cys        | Lys        |
| Phe<br>210 | Asp        | Phe        | Leu        | Ala        | Ile<br>215 | Tyr        | Asp        | Gly        | Pro        | Ser        | Thr<br>220 | Asn        | Ser        | Gly        | Leu        |
| Ile<br>225 | Gly        | Gln        | Val        | Cys<br>230 | Gly        | Arg        | Val        | Thr        | Pro        | Thr<br>235 | Phe        | Glu        | Ser        | Ser        | Ser<br>240 |
| Asn        | Ser        | Leu        | Thr<br>245 | Val        | Val        | Leu        | Ser        | Thr        | Asp<br>250 | Tyr        | Ala        | Asn        | Ser        | Tyr<br>255 | Arg        |
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565

570

575

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&lt;210&gt; 192

&lt;211&gt; 22

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&lt;210&gt; 193

&lt;211&gt; 47

&lt;212&gt; DNA

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&lt;210&gt; 194

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&lt;212&gt; DNA

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 aactggataa gaaaattatt tggcagttca gccctttccc tttttccac taaatttttc 1620  
 ttaaattacc catgtaacca ttttaactct ccagtgcact ttgccattaa agtctcttca 1680  
 cattgatttg tttccatgtg tgactcagag gtgagaattt tttcacatta tagtagcaag 1740  
 gaattggttg tattatggac cgaactgaaa attttatgtt gaagccatat ccccatgat 1800  
 tatatagtta tgcatactt aatatgggga tattttctgg gaaatgcatt gctagtcaat 1860  
 ttttttttgt gccaacatca tagagtgtat ttacaaaatc ctagatggca tagcctacta 1920  
 cacaccta atgtgtatggta tagactgttg ctctaggct acagacatat acagcatgtt 1980  
 actgaatact gtaggcaata gtaacagtgg tatttgtata tcgaaacata tggaaacata 2040  
 gagaaggtac agtaaaaata ctgtaaaata aatggtgcac ctgtataggg cacttaccac 2100  
 gaatggagct tacaggactg gaagtgtgtc tgggtgagtc agtgagtga tgtgaaggcc 2160  
 taggacatta ttgaacactg ccagacgtta taaatactgt atgcttaggc tacactacat 2220  
 ttataaaaaa aagtttttct ttcttcaatt ataaattaac ataagtgtac tgtaacttta 2280  
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 taaactcatt gtgcaaatgt aa 2362

<210> 195

<211> 467

<212> PRT

<213> Homo sapiens

<400> 195

Met Arg Pro Gln Glu Leu Pro Arg Leu Ala Phe Pro Leu Leu Leu Leu  
 1 5 10 15

Leu Leu Leu Leu Leu Pro Pro Pro Pro Cys Pro Ala His Ser Ala Thr  
 20 25 30

Arg Phe Asp Pro Thr Trp Glu Ser Leu Asp Ala Arg Gln Leu Pro Ala  
 35 40 45

090506-0494

Trp Phe Asp Gln Ala Lys Phe Gly Ile Phe Ile His Trp Gly Val Phe  
 50 55 60  
 Ser Val Pro Ser Phe Gly Ser Glu Trp Phe Trp Trp Tyr Trp Gln Lys  
 65 70 75 80  
 Glu Lys Ile Pro Lys Tyr Val Glu Phe Met Lys Asp Asn Tyr Pro Pro  
 85 90 95  
 Ser Phe Lys Tyr Glu Asp Phe Gly Pro Leu Phe Thr Ala Lys Phe Phe  
 100 105 110  
 Asn Ala Asn Gln Trp Ala Asp Ile Phe Gln Ala Ser Gly Ala Lys Tyr  
 115 120 125  
 Ile Val Leu Thr Ser Lys His His Glu Gly Phe Thr Leu Trp Gly Ser  
 130 135 140  
 Glu Tyr Ser Trp Asn Trp Asn Ala Ile Asp Glu Gly Pro Lys Arg Asp  
 145 150 155 160  
 Ile Val Lys Glu Leu Glu Val Ala Ile Arg Asn Arg Thr Asp Leu Arg  
 165 170 175  
 Phe Gly Leu Tyr Tyr Ser Leu Phe Glu Trp Phe His Pro Leu Phe Leu  
 180 185 190  
 Glu Asp Glu Ser Ser Ser Phe His Lys Arg Gln Phe Pro Val Ser Lys  
 195 200 205  
 Thr Leu Pro Glu Leu Tyr Glu Leu Val Asn Asn Tyr Gln Pro Glu Val  
 210 215 220  
 Leu Trp Ser Asp Gly Asp Gly Gly Ala Pro Asp Gln Tyr Trp Asn Ser  
 225 230 235 240  
 Thr Gly Phe Leu Ala Trp Leu Tyr Asn Glu Ser Pro Val Arg Gly Thr  
 245 250 255  
 Val Val Thr Asn Asp Arg Trp Gly Ala Gly Ser Ile Cys Lys His Gly  
 260 265 270  
 Gly Phe Tyr Thr Cys Ser Asp Arg Tyr Asn Pro Gly His Leu Leu Pro  
 275 280 285  
 His Lys Trp Glu Asn Cys Met Thr Ile Asp Lys Leu Ser Trp Gly Tyr  
 290 295 300  
 Arg Arg Glu Ala Gly Ile Ser Asp Tyr Leu Thr Ile Glu Glu Leu Val  
 305 310 315 320  
 Lys Gln Leu Val Glu Thr Val Ser Cys Gly Gly Asn Leu Leu Met Asn  
 325 330 335

0905056-07201  
 102120" 95050560

Ile Gly Pro Thr Leu Asp Gly Thr Ile Ser Val Val Phe Glu Glu Arg  
 340 345 350

Leu Arg Gln Val Gly Ser Trp Leu Lys Val Asn Gly Glu Ala Ile Tyr  
 355 360 365

Glu Thr Tyr Thr Trp Arg Ser Gln Asn Asp Thr Val Thr Pro Asp Val  
 370 375 380

Trp Tyr Thr Ser Lys Pro Lys Glu Lys Leu Val Tyr Ala Ile Phe Leu  
 385 390 395 400

Lys Trp Pro Thr Ser Gly Gln Leu Phe Leu Gly His Pro Lys Ala Ile  
 405 410 415

Leu Gly Ala Thr Glu Val Lys Leu Leu Gly His Gly Gln Pro Leu Asn  
 420 425 430

Trp Ile Ser Leu Glu Gln Asn Gly Ile Met Val Glu Leu Pro Gln Leu  
 435 440 445

Thr Ile His Gln Met Pro Cys Lys Trp Gly Trp Ala Leu Ala Leu Thr  
 450 455 460

Asn Val Ile  
 465

<210> 196

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
 oligonucleotide probe

<400> 196

tggtttgacc aggccaagtt cgg

23

<210> 197

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
 oligonucleotide probe

<400> 197

ggattcatcc tcaaggaaga gcgg

24

<210> 198

<211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
 oligonucleotide probe

<400> 198

aacttgccgc atcagccact ctgc

24

<210> 199

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
 oligonucleotide probe

<400> 199

ttccgtgccc agcttcggta gcgagtgggt ctggtggtat tggca

45

<210> 200

<211> 2372

<212> DNA

<213> Homo sapiens

<400> 200

```

agcagggaaa tccggatgtc tccggttatga agtggagcag tgagtgtgag cctcaacata 60
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catctgaggt gtttccctgg ctctgaaggg gtaggcacga tggccaggtg cttcagcctg 180
gtgttgcttc tcacttccat ctggaccacg aggtcctctg tccaaggctc tttgcgtgca 240
gaagagcttt ccatccaggt gtcatgcaga attatgggga tcacccttgt gagcaaaaag 300
gcgaaccagc agctgaattt cacagaagct aaggaggcct gtaggctgct gggactaagt 360
ttggccggca aggaccaagt tgaaacagcc ttgaaagcta gctttgaaac ttgcagctat 420
ggctgggttg gagatggatt cgtggtcac tctaggatta gcccaaacc caagtgtggg 480
aaaaatgggg tgggtgtcct gatttgggaag gttccagtga gccgacagt tgcagcctat 540
tgttacaact catctgatac ttggactaac tcgtgcattc cagaaattat caccaccaa 600
gatcccatat tcaacactca aactgcaaca caaacaacag aatttattgt cagtgcagct 660
acctaactcg tggcatcccc ttactctaca ataactgccc ctactactac tctcctgct 720
ccagcttcca cttctattcc acggagaaaa aaattgattt gtgtcacaga agtttttatg 780
gaaactagca ccatgtctac agaaactgaa ccatttgttg aaaataaagc agcattcaag 840
aatgaagctg ctgggtttgg aggtgtcccc acggctctgc tagtgcttgc tctcctcttc 900
tttggtgctg cagctgggtc tggattttgc tatgtcaaaa ggtatgtgaa ggccttccct 960
tttacaacaa agaatcagca gaaggaaatg atcgaaacca aagtagtaaa ggaggagaag 1020
gccaatgata gcaaccctaa tgaggaatca aagaaaactg ataaaaacc agaagagtcc 1080
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gtcctaataa tatccactg ggagaaagga gttttgcaaa gtgcaaggac ctaaaacatc 1440

```

```

tcatcagtat ccagtggtaa aaaggcctcc tggctgtctg aggetaggtg ggttgaaagc 1500
caaggagtca ctgagaccaa ggctttctct actgattccg cagctcagac cttttcttca 1560
gctctgaaag agaaacacgt atcccacctg acatgtcctt ctgagcccgg taagagcaaa 1620
agaatggcag aaaagtttag cccctgaaag ccatggagat tctcataact tgagacctaa 1680
tctctgtaaa gctaaaataa agaaatagaa caaggctgag gatacgacag tacactgtca 1740
gcagggactg taaacacaga cagggtcaaa gtgttttctc tgaacacatt gagttggaat 1800
cactgttttag aacacacaca cttacttttt ctggtctcta ccactgctga ttttttctct 1860
aggaaatata cttttacaag taacaaaaat aaaaactctt ataaatttct atttttatct 1920
gagttacaga aatgattact aaggaagatt actcagtaat ttgttttaaaa agtaataaaa 1980
ttcaacaaac atttgctgaa tagctactat atgtcaagtg ctgtgcaagg tattacactc 2040
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ttttttcagt tttgatattt ctagcttatt tacttccaaa ctaattttta tttttgctga 2160
gactaatctt attcattttc tctaatatgg caaccattat aaccttaatt tattattaac 2220
atacctaaga agtacattgt tacctctata taccaaagca catttttaaaa gtgccattaa 2280
caaatgtatc actagccctc ctttttccaa caagaaggga ctgagagatg cagaaatatt 2340
tgtgacaaaa aattaaagca tttagaaaac tt 2372

```

<210> 201

<211> 322

<212> PRT

<213> Artificial sequence

<220>

<223> Synthetic protein

<400> 201

```

Met Ala Arg Cys Phe Ser Leu Val Leu Leu Leu Thr Ser Ile Trp Thr
  1              5              10              15

```

```

Thr Arg Leu Leu Val Gln Gly Ser Leu Arg Ala Glu Glu Leu Ser Ile
      20              25              30

```

```

Gln Val Ser Cys Arg Ile Met Gly Ile Thr Leu Val Ser Lys Lys Ala
      35              40              45

```

```

Asn Gln Gln Leu Asn Phe Thr Glu Ala Lys Glu Ala Cys Arg Leu Leu
      50              55              60

```

```

Gly Leu Ser Leu Ala Gly Lys Asp Gln Val Glu Thr Ala Leu Lys Ala
      65              70              75              80

```

```

Ser Phe Glu Thr Cys Ser Tyr Gly Trp Val Gly Asp Gly Phe Val Val
      85              90              95

```

```

Ile Ser Arg Ile Ser Pro Asn Pro Lys Cys Gly Lys Asn Gly Val Gly
      100              105              110

```

```

Val Leu Ile Trp Lys Val Pro Val Ser Arg Gln Phe Ala Ala Tyr Cys
      115              120              125

```

```

Tyr Asn Ser Ser Asp Thr Trp Thr Asn Ser Cys Ile Pro Glu Ile Ile
      130              135              140

```





&lt;222&gt; (1003)

&lt;223&gt; a, t, c or g

&lt;400&gt; 206

```

agatggcggt cttggcacct ctaattgctc tcgtgtattc ggtgccgcga ctttcacgat 60
ggctcgccca accttactac cttctgtcgg cctgtctctc tgctgccttc ctactcgtga 120
ggaaactgcc gccgctctgc cacggtctgc ccaccaacg cgaagacggt aaccctgtgtg 180
actttgactg gagagaagtg gagatcctga tgtttctcag tgccattgtg atgatgaaga 240
accgcagatc catcactgtg gagcaacata taggcaacat tttcatgttt agtaaagtgg 300
ccaacacaat tcttttcttc cgcttgata ttgcgatggg cctactttac atcacactct 360
gcatagtgtt cctgatgacg tgcaaaccac ccctatatat gggccctgag tatatcaagt 420
acttcaatga taaaaccatt gatgaggaac tagaacggga caagagggtc acttggattg 480
tggaagtctt tgccaattgg tctaataact gccaatcatt tgcccctatc tatgctgacc 540
tctcccttaa atacaactgt acagggtctaa attttgggaa ggtggatgtt ggacgctata 600
ctgatgttag tacgcggtac aaagtgcgca catcacccct caccaagcaa ctccctaccc 660
tgatcctgtt ccaagggtggc aaggaggcaa tgcggcgggc acagattgac aagaaaggac 720
gggctgtctc atggaccttc tctgaggaga atgtgatccg agaatttaac ttaaatgagc 780
tataaccagc ggccaagaaa ctatcaaagg ctggagacaa tatccctgag gacgagcctg 840
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gctgcagcct ttnattnatg ttttcccttt ggctgngact ggntggggca gcatgcagct 1020
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actttccttt gtgtggtagg acttggagga gaaatccctt ggactttcac taacctctg 1560
acatactccc cacaccagc tgatggcttt ccgtaataaa aagattggga tttcctttt 1620

```

&lt;210&gt; 207

&lt;211&gt; 296

&lt;212&gt; PRT

&lt;213&gt; Homo sapiens

&lt;400&gt; 207

```

Met Ala Val Leu Ala Pro Leu Ile Ala Leu Val Tyr Ser Val Pro Arg
 1             5             10             15

Leu Ser Arg Trp Leu Ala Gln Pro Tyr Tyr Leu Leu Ser Ala Leu Leu
 20             25             30

Ser Ala Ala Phe Leu Leu Val Arg Lys Leu Pro Pro Leu Cys His Gly
 35             40             45

Leu Pro Thr Gln Arg Glu Asp Gly Asn Pro Cys Asp Phe Asp Trp Arg
 50             55             60

Glu Val Glu Ile Leu Met Phe Leu Ser Ala Ile Val Met Met Lys Asn
 65             70             75             80

```



Arg Arg Ser Ile Thr Val Glu Gln His Ile Gly Asn Ile Phe Met Phe  
85 90 95

Ser Lys Val Ala Asn Thr Ile Leu Phe Phe Arg Leu Asp Ile Arg Met  
100 105 110

Gly Leu Leu Tyr Ile Thr Leu Cys Ile Val Phe Leu Met Thr Cys Lys  
115 120 125

Pro Pro Leu Tyr Met Gly Pro Glu Tyr Ile Lys Tyr Phe Asn Asp Lys  
130 135 140

Thr Ile Asp Glu Glu Leu Glu Arg Asp Lys Arg Val Thr Trp Ile Val  
145 150 155 160

Glu Phe Phe Ala Asn Trp Ser Asn Asp Cys Gln Ser Phe Ala Pro Ile  
165 170 175

Tyr Ala Asp Leu Ser Leu Lys Tyr Asn Cys Thr Gly Leu Asn Phe Gly  
180 185 190

Lys Val Asp Val Gly Arg Tyr Thr Asp Val Ser Thr Arg Tyr Lys Val  
195 200 205

Ser Thr Ser Pro Leu Thr Lys Gln Leu Pro Thr Leu Ile Leu Phe Gln  
210 215 220

Gly Gly Lys Glu Ala Met Arg Arg Pro Gln Ile Asp Lys Lys Gly Arg  
225 230 235 240

Ala Val Ser Trp Thr Phe Ser Glu Glu Asn Val Ile Arg Glu Phe Asn  
245 250 255

Leu Asn Glu Leu Tyr Gln Arg Ala Lys Lys Leu Ser Lys Ala Gly Asp  
260 265 270

Asn Ile Pro Glu Glu Gln Pro Val Ala Ser Thr Pro Thr Thr Val Ser  
275 280 285

Asp Gly Glu Asn Lys Lys Asp Lys  
290 295

<210> 208

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
oligonucleotide probe

<400> 208

gcttgatattcgcattgggcctac

<210> 209  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
 oligonucleotide probe

<400> 209  
 tggagacaat atccctgagg 20

<210> 210  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
 oligonucleotide probe

<400> 210  
 aacagttggc cacagcatgg cagg 24

<210> 211  
 <211> 50  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
 oligonucleotide probe

<400> 211  
 ccattgatga ggaactagaa cgggacaaga gggtcacttg gattgtggag 50

<210> 212  
 <211> 1985  
 <212> DNA  
 <213> Homo sapiens

<400> 212  
 ggacagctcg cggcccccca gagctctagc cgtcgaggag ctgcctgggg acgtttgccc 60  
 tggggcccca gcctggcccg ggtcaccctg gcatgaggag atgggcctgt tgctcctggt 120  
 cccattgctc ctgctgcccc gctcctacgg actgcccttc tacaacggct tctactactc 180  
 caacagcgcc aacgaccaga acctaggcaa cggtcatggc aaagacctcc ttaatggagt 240  
 gaagctgggtg gtggagacac ccgaggagac cctgttcacc taccaagggg ccagtgtgat 300  
 cctgccctgc cgctaccgct acgagccggc cctgggtctcc ccgcggcgtg tgcgtgtcaa 360  
 atggtggaag ctgtcggaga acggggcccc agagaaggac gtgctgggtg ccacgaggct 420  
 gaggcaccgc tcctttgggg actaccaagg ccgcgtgcac ctgcggcagg acaaagagca 480  
 tgacgtctcg ctggagatcc aggatctgcg gctggaggac tatgggcgtt accgctgtga 540  
 ggtcattgac gggctggagg atgaaagcgg tctggtggag ctggagctgc ggggtgtggt 600

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<210> 213
<211> 360
<212> PRT
<213> Homo sapiens
```

```

<400> 213
Met Gly Leu Leu Leu Leu Val Pro Leu Leu Leu Leu Pro Gly Ser Tyr
  1                               5          10          15

Gly Leu Pro Phe Tyr Asn Gly Phe Tyr Tyr Ser Asn Ser Ala Asn Asp
  20          25          30

Gln Asn Leu Gly Asn Gly His Gly Lys Asp Leu Leu Asn Gly Val Lys
  35          40          45

Leu Val Val Glu Thr Pro Glu Glu Thr Leu Phe Thr Tyr Gln Gly Ala
  50          55          60

Ser Val Ile Leu Pro Cys Arg Tyr Arg Tyr Glu Pro Ala Leu Val Ser
  65          70          75          80

Pro Arg Arg Val Arg Val Lys Trp Trp Lys Leu Ser Glu Asn Gly Ala
  85          90          95

Pro Glu Lys Asp Val Leu Val Ala Ile Gly Leu Arg His Arg Ser Phe
 100          105          110

Gly Asp Tyr Gln Gly Arg Val His Leu Arg Gln Asp Lys Glu His Asp

```

| 115 |     |     |     |     | 120 |     |     |     |     | 125 |     |     |     |     |     |  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Val | Ser | Leu | Glu | Ile | Gln | Asp | Leu | Arg | Leu | Glu | Asp | Tyr | Gly | Arg | Tyr |  |
| 130 |     |     |     |     | 135 |     |     |     |     | 140 |     |     |     |     |     |  |
| Arg | Cys | Glu | Val | Ile | Asp | Gly | Leu | Glu | Asp | Glu | Ser | Gly | Leu | Val | Glu |  |
| 145 |     |     |     |     | 150 |     |     |     |     | 155 |     |     |     |     | 160 |  |
| Leu | Glu | Leu | Arg | Gly | Val | Val | Phe | Pro | Tyr | Gln | Ser | Pro | Asn | Gly | Arg |  |
|     |     |     |     |     | 165 |     |     |     |     | 170 |     |     |     |     | 175 |  |
| Tyr | Gln | Phe | Asn | Phe | His | Glu | Gly | Gln | Gln | Val | Cys | Ala | Glu | Gln | Ala |  |
|     |     |     |     |     | 180 |     |     |     |     | 185 |     |     |     |     | 190 |  |
| Ala | Val | Val | Ala | Ser | Phe | Glu | Gln | Leu | Phe | Arg | Ala | Trp | Glu | Glu | Gly |  |
| 195 |     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |     |     |  |
| Leu | Asp | Trp | Cys | Asn | Ala | Gly | Trp | Leu | Gln | Asp | Ala | Thr | Val | Gln | Tyr |  |
| 210 |     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     |     |  |
| Pro | Ile | Met | Leu | Pro | Arg | Gln | Pro | Cys | Gly | Gly | Pro | Gly | Leu | Ala | Pro |  |
| 225 |     |     |     |     | 230 |     |     |     |     | 235 |     |     |     |     | 240 |  |
| Gly | Val | Arg | Ser | Tyr | Gly | Pro | Arg | His | Arg | Arg | Leu | His | Arg | Tyr | Asp |  |
|     |     |     |     |     | 245 |     |     |     |     | 250 |     |     |     |     | 255 |  |
| Val | Phe | Cys | Phe | Ala | Thr | Ala | Leu | Lys | Gly | Arg | Val | Tyr | Tyr | Leu | Glu |  |
|     |     |     |     |     | 260 |     |     |     |     | 265 |     |     |     |     | 270 |  |
| His | Pro | Glu | Lys | Leu | Thr | Leu | Thr | Glu | Ala | Arg | Glu | Ala | Cys | Gln | Glu |  |
| 275 |     |     |     |     | 280 |     |     |     |     | 285 |     |     |     |     |     |  |
| Asp | Asp | Ala | Thr | Ile | Ala | Lys | Val | Gly | Gln | Leu | Phe | Ala | Ala | Trp | Lys |  |
| 290 |     |     |     |     | 295 |     |     |     |     | 300 |     |     |     |     |     |  |
| Phe | His | Gly | Leu | Asp | Arg | Cys | Asp | Ala | Gly | Trp | Leu | Ala | Asp | Gly | Ser |  |
| 305 |     |     |     |     | 310 |     |     |     |     | 315 |     |     |     |     | 320 |  |
| Val | Arg | Tyr | Pro | Val | Val | His | Pro | His | Pro | Asn | Cys | Gly | Pro | Pro | Glu |  |
|     |     |     |     |     | 325 |     |     |     |     | 330 |     |     |     |     | 335 |  |
| Pro | Gly | Val | Arg | Ser | Phe | Gly | Phe | Pro | Asp | Pro | Gln | Ser | Arg | Leu | Tyr |  |
| 340 |     |     |     |     | 345 |     |     |     |     | 350 |     |     |     |     |     |  |
| Gly | Val | Tyr | Cys | Tyr | Arg | Gln | His |     |     |     |     |     |     |     |     |  |
| 355 |     |     |     |     | 360 |     |     |     |     |     |     |     |     |     |     |  |

&lt;210&gt; 214

&lt;211&gt; 18

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

<223> Description of Artificial Sequence: Synthetic  
oligonucleotide probe

<400> 214  
tgcttcgcta ctgccctc 18

<210> 215  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
oligonucleotide probe

<400> 215  
ttcccttggtg gggtggag 18

<210> 216  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
oligonucleotide probe

<400> 216  
agggtggaa gccagttc 18

<210> 217  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
oligonucleotide probe

<400> 217  
agccagtggag gaaatgag 18

<210> 218  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Description of Artificial Sequence: Synthetic  
oligonucleotide probe

<400> 218  
tgtccaaagt acacacacct gagg 24

<210> 219  
 <211> 45  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Description of Artificial Sequence: Synthetic  
 oligonucleotide probe

<400> 219  
 gatgccacga tcgccaaggt gggacagctc tttgccgcct ggaag 45

<210> 220  
 <211> 1503  
 <212> DNA  
 <213> Homo sapiens

<400> 220  
 ggagagcgga gcgaagctgg ataacagggg accgatgatg tggcgaccat cagttctgct 60  
 gcttctgttg ctactgaggc acggggccca ggggaagcca tccccagacg caggccctca 120  
 tggccagggg aggggtgcacc aggcggcccc cctgagcgac gctccccatg atgacgcca 180  
 cgggaacttc cagtacgacc atgaggcttt cctgggacgg gaagtggcca aggaattcga 240  
 ccaactcacc ccagaggaaa gccaggcccc tctggggcgg atcgtggacc gcatggaccg 300  
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<210> 221  
 <211> 328  
 <212> PRT  
 <213> Homo sapiens

<400> 221  
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| 1   | 5   | 10  | 15  |
| Gly Ala Gln Gly Lys Pro Ser Pro Asp Ala Gly Pro His Gly Gln Gly | 20  | 25  | 30  |
| Arg Val His Gln Ala Ala Pro Leu Ser Asp Ala Pro His Asp Asp Ala | 35  | 40  | 45  |
| His Gly Asn Phe Gln Tyr Asp His Glu Ala Phe Leu Gly Arg Glu Val | 50  | 55  | 60  |
| Ala Lys Glu Phe Asp Gln Leu Thr Pro Glu Glu Ser Gln Ala Arg Leu | 65  | 70  | 75  |
| Gly Arg Ile Val Asp Arg Met Asp Arg Ala Gly Asp Gly Asp Gly Trp | 85  | 90  | 95  |
| Val Ser Leu Ala Glu Leu Arg Ala Trp Ile Ala His Thr Gln Gln Arg | 100 | 105 | 110 |
| His Ile Arg Asp Ser Val Ser Ala Ala Trp Asp Thr Tyr Asp Thr Asp | 115 | 120 | 125 |
| Arg Asp Gly Arg Val Gly Trp Glu Glu Leu Arg Asn Ala Thr Tyr Gly | 130 | 135 | 140 |
| His Tyr Ala Pro Gly Glu Glu Phe His Asp Val Glu Asp Ala Glu Thr | 145 | 150 | 155 |
| Tyr Lys Lys Met Leu Ala Arg Asp Glu Arg Arg Phe Arg Val Ala Asp | 165 | 170 | 175 |
| Gln Asp Gly Asp Ser Met Ala Thr Arg Glu Glu Leu Thr Ala Phe Leu | 180 | 185 | 190 |
| His Pro Glu Glu Phe Pro His Met Arg Asp Ile Val Ile Ala Glu Thr | 195 | 200 | 205 |
| Leu Glu Asp Leu Asp Arg Asn Lys Asp Gly Tyr Val Gln Val Glu Glu | 210 | 215 | 220 |
| Tyr Ile Ala Asp Leu Tyr Ser Ala Glu Pro Gly Glu Glu Glu Pro Ala | 225 | 230 | 235 |
| Trp Val Gln Thr Glu Arg Gln Gln Phe Arg Asp Phe Arg Asp Leu Asn | 245 | 250 | 255 |
| Lys Asp Gly His Leu Asp Gly Ser Glu Val Gly His Trp Val Leu Pro | 260 | 265 | 270 |
| Pro Ala Gln Asp Gln Pro Leu Val Glu Ala Asn His Leu Leu His Glu | 275 | 280 | 285 |

0905056 04004

Ser Asp Thr Asp Lys Asp Gly Arg Leu Ser Lys Ala Glu Ile Leu Gly  
 290 295 300

Asn Trp Asn Met Phe Val Gly Ser Gln Ala Thr Asn Tyr Gly Glu Asp  
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Leu Thr Arg His His Asp Glu Leu  
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<210> 222

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
 oligonucleotide probe

<400> 222

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20

<210> 223

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
 oligonucleotide probe

<400> 223

gaaatcctgg gtaattgg

18

<210> 224

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
 oligonucleotide probe

<400> 224

gtgcgcggtg ctcacagctc atc

23

<210> 225

<211> 44

<212> DNA

<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Synthetic  
 oligonucleotide probe



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44

<210> 226  
 <211> 2403  
 <212> DNA  
 <213> Homo sapiens

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 aaa 2403

<210> 227







<211> 18  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: Synthetic  
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 <400> 232  
 ttcctcaaga gggcagcc 18  
  
 <210> 233  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: Synthetic  
           oligonucleotide probe  
  
 <400> 233  
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 <210> 234  
 <211> 45  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Description of Artificial Sequence: Synthetic  
           oligonucleotide probe  
  
 <400> 234  
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 <210> 235  
 <211> 2586  
 <212> DNA  
 <213> Homo sapiens  
  
 <400> 235  
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<210> 236

<211> 350

<212> PRT

<213> Homo sapiens

<400> 236

Met Gln Arg Leu Gly Ala Thr Leu Leu Cys Leu Leu Leu Ala Ala Ala  
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Val Pro Thr Ala Pro Ala Pro Ala Pro Thr Ala Thr Ser Ala Pro Val  
 20 25 30

Lys Pro Gly Pro Ala Leu Ser Tyr Pro Gln Glu Glu Ala Thr Leu Asn  
 35 40 45

Glu Met Phe Arg Glu Val Glu Glu Leu Met Glu Asp Thr Gln His Lys  
 50 55 60

Leu Arg Ser Ala Val Glu Glu Met Glu Ala Glu Glu Ala Ala Ala Lys  
 65 70 75 80







<210> 242  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic Oligonucleotide Probe

<400> 242  
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24

<210> 243  
 <211> 45  
 <212> DNA  
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<220>  
 <223> Synthetic Oligonucleotide Probe

<400> 243  
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45

<210> 244  
 <211> 3679  
 <212> DNA  
 <213> Homo Sapien

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<210> 245

<211> 713

<212> PRT

<213> Homo Sapien

<400> 245

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| Met | Arg | Leu | Leu | Val | Ala | Pro | Leu | Leu | Ala | Trp | Val | Ala | Gly |     |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |
| Ala | Thr | Ala | Thr | Val | Pro | Val | Val | Pro | Trp | His | Val | Pro | Cys | Pro |
|     |     |     |     | 20  |     |     |     | 25  |     |     |     |     |     | 30  |
| Pro | Gln | Cys | Ala | Cys | Gln | Ile | Arg | Pro | Trp | Tyr | Thr | Pro | Arg | Ser |
|     |     |     |     | 35  |     |     |     | 40  |     |     |     |     |     | 45  |
| Ser | Tyr | Arg | Glu | Ala | Thr | Thr | Val | Asp | Cys | Asn | Asp | Leu | Phe | Leu |
|     |     |     |     | 50  |     |     |     | 55  |     |     |     |     |     | 60  |
| Thr | Ala | Val | Pro | Pro | Ala | Leu | Pro | Ala | Gly | Thr | Gln | Thr | Leu | Leu |
|     |     |     |     | 65  |     |     |     | 70  |     |     |     |     |     | 75  |
| Leu | Gln | Ser | Asn | Ser | Ile | Val | Arg | Val | Asp | Gln | Ser | Glu | Leu | Gly |
|     |     |     |     | 80  |     |     |     | 85  |     |     |     |     |     | 90  |
| Tyr | Leu | Ala | Asn | Leu | Thr | Glu | Leu | Asp | Leu | Ser | Gln | Asn | Ser | Phe |
|     |     |     |     | 95  |     |     |     | 100 |     |     |     |     |     | 105 |
| Ser | Asp | Ala | Arg | Asp | Cys | Asp | Phe | His | Ala | Leu | Pro | Gln | Leu | Leu |
|     |     |     |     | 110 |     |     |     | 115 |     |     |     |     |     | 120 |
| Ser | Leu | His | Leu | Glu | Glu | Asn | Gln | Leu | Thr | Arg | Leu | Glu | Asp | His |
|     |     |     |     | 125 |     |     |     | 130 |     |     |     |     |     | 135 |
| Ser | Phe | Ala | Gly | Leu | Ala | Ser | Leu | Gln | Glu | Leu | Tyr | Leu | Asn | His |
|     |     |     |     | 140 |     |     |     | 145 |     |     |     |     |     | 150 |

|                 |                     |                         |
|-----------------|---------------------|-------------------------|
| Asn Gln Leu Tyr | Arg Ile Ala Pro Arg | Ala Phe Ser Gly Leu Ser |
| 155             | 160                 | 165                     |
| Asn Leu Leu Arg | Leu His Leu Asn Ser | Asn Leu Leu Arg Ala Ile |
| 170             | 175                 | 180                     |
| Asp Ser Arg Trp | Phe Glu Met Leu Pro | Asn Leu Glu Ile Leu Met |
| 185             | 190                 | 195                     |
| Ile Gly Gly Asn | Lys Val Asp Ala Ile | Leu Asp Met Asn Phe Arg |
| 200             | 205                 | 210                     |
| Pro Leu Ala Asn | Leu Arg Ser Leu Val | Leu Ala Gly Met Asn Leu |
| 215             | 220                 | 225                     |
| Arg Glu Ile Ser | Asp Tyr Ala Leu Glu | Gly Leu Gln Ser Leu Glu |
| 230             | 235                 | 240                     |
| Ser Leu Ser Phe | Tyr Asp Asn Gln Leu | Ala Arg Val Pro Arg Arg |
| 245             | 250                 | 255                     |
| Ala Leu Glu Gln | Val Pro Gly Leu Lys | Phe Leu Asp Leu Asn Lys |
| 260             | 265                 | 270                     |
| Asn Pro Leu Gln | Arg Val Gly Pro Gly | Asp Phe Ala Asn Met Leu |
| 275             | 280                 | 285                     |
| His Leu Lys Glu | Leu Gly Leu Asn Asn | Met Glu Glu Leu Val Ser |
| 290             | 295                 | 300                     |
| Ile Asp Lys Phe | Ala Leu Val Asn Leu | Pro Glu Leu Thr Lys Leu |
| 305             | 310                 | 315                     |
| Asp Ile Thr Asn | Asn Pro Arg Leu Ser | Phe Ile His Pro Arg Ala |
| 320             | 325                 | 330                     |
| Phe His His Leu | Pro Gln Met Glu Thr | Leu Met Leu Asn Asn Asn |
| 335             | 340                 | 345                     |
| Ala Leu Ser Ala | Leu His Gln Gln Thr | Val Glu Ser Leu Pro Asn |
| 350             | 355                 | 360                     |
| Leu Gln Glu Val | Gly Leu His Gly Asn | Pro Ile Arg Cys Asp Cys |
| 365             | 370                 | 375                     |
| Val Ile Arg Trp | Ala Asn Ala Thr Gly | Thr Arg Val Arg Phe Ile |
| 380             | 385                 | 390                     |
| Glu Pro Gln Ser | Thr Leu Cys Ala Glu | Pro Pro Asp Leu Gln Arg |
| 395             | 400                 | 405                     |
| Leu Pro Val Arg | Glu Val Pro Phe Arg | Glu Met Thr Asp His Cys |

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TOT 20 9505056



Ala Pro Ser Val Arg Val Val Ser Ala Pro Leu Val Leu Pro Trp  
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Asn Pro Gly Arg Lys Leu Pro Arg Ser Ser Glu Gly Glu Thr Leu  
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Leu Pro Pro Leu Ser Gln Asn Ser  
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<212> PRT

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<400> 250

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Cys Thr Val Asp Ile Glu Ser Leu Thr Gly Tyr Arg Thr Tyr Arg  
 35 40 45

Cys Ala His Pro Leu Ala Thr Leu Phe Lys Ile Leu Ala Ser Phe  
 50 55 60

Tyr Ile Ser Leu Val Ile Phe Tyr Gly Leu Ile Cys Met Tyr Thr  
 65 70 75

Leu Trp Trp Met Leu Arg Arg Ser Leu Lys Lys Tyr Ser Phe Glu  
 80 85 90

Ser Ile Arg Glu Glu Ser Ser Tyr Ser Asp Ile Pro Asp Val Lys

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|     |     |     |     | 95  |     |     |     |     | 100 |     |     |     |     | 105 |
| Asn | Asp | Phe | Ala | Phe | Met | Leu | His | Leu | Ile | Asp | Gln | Tyr | Asp | Pro |
|     |     |     |     | 110 |     |     |     |     | 115 |     |     |     |     | 120 |
| Leu | Tyr | Ser | Lys | Arg | Phe | Ala | Val | Phe | Leu | Ser | Glu | Val | Ser | Glu |
|     |     |     |     | 125 |     |     |     |     | 130 |     |     |     |     | 135 |
| Asn | Lys | Leu | Arg | Gln | Leu | Asn | Leu | Asn | Asn | Glu | Trp | Thr | Leu | Asp |
|     |     |     |     | 140 |     |     |     |     | 145 |     |     |     |     | 150 |
| Lys | Leu | Arg | Gln | Arg | Leu | Thr | Lys | Asn | Ala | Gln | Asp | Lys | Leu | Glu |
|     |     |     |     | 155 |     |     |     |     | 160 |     |     |     |     | 165 |
| Leu | His | Leu | Phe | Met | Leu | Ser | Gly | Ile | Pro | Asp | Thr | Val | Phe | Asp |
|     |     |     |     | 170 |     |     |     |     | 175 |     |     |     |     | 180 |
| Leu | Val | Glu | Leu | Glu | Val | Leu | Lys | Leu | Glu | Leu | Ile | Pro | Asp | Val |
|     |     |     |     | 185 |     |     |     |     | 190 |     |     |     |     | 195 |
| Thr | Ile | Pro | Pro | Ser | Ile | Ala | Gln | Leu | Thr | Gly | Leu | Lys | Glu | Leu |
|     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |     | 210 |
| Trp | Leu | Tyr | His | Thr | Ala | Ala | Lys | Ile | Glu | Ala | Pro | Ala | Leu | Ala |
|     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     | 225 |
| Phe | Leu | Arg | Glu | Asn | Leu | Arg | Ala | Leu | His | Ile | Lys | Phe | Thr | Asp |
|     |     |     |     | 230 |     |     |     |     | 235 |     |     |     |     | 240 |
| Ile | Lys | Glu | Ile | Pro | Leu | Trp | Ile | Tyr | Ser | Leu | Lys | Thr | Leu | Glu |
|     |     |     |     | 245 |     |     |     |     | 250 |     |     |     |     | 255 |
| Glu | Leu | His | Leu | Thr | Gly | Asn | Leu | Ser | Ala | Glu | Asn | Asn | Arg | Tyr |
|     |     |     |     | 260 |     |     |     |     | 265 |     |     |     |     | 270 |
| Ile | Val | Ile | Asp | Gly | Leu | Arg | Glu | Leu | Lys | Arg | Leu | Lys | Val | Leu |
|     |     |     |     | 275 |     |     |     |     | 280 |     |     |     |     | 285 |
| Arg | Leu | Lys | Ser | Asn | Leu | Ser | Lys | Leu | Pro | Gln | Val | Val | Thr | Asp |
|     |     |     |     | 290 |     |     |     |     | 295 |     |     |     |     | 300 |
| Val | Gly | Val | His | Leu | Gln | Lys | Leu | Ser | Ile | Asn | Asn | Glu | Gly | Thr |
|     |     |     |     | 305 |     |     |     |     | 310 |     |     |     |     | 315 |
| Lys | Leu | Ile | Val | Leu | Asn | Ser | Leu | Lys | Lys | Met | Ala | Asn | Leu | Thr |
|     |     |     |     | 320 |     |     |     |     | 325 |     |     |     |     | 330 |
| Glu | Leu | Glu | Leu | Ile | Arg | Cys | Asp | Leu | Glu | Arg | Ile | Pro | His | Ser |
|     |     |     |     | 335 |     |     |     |     | 340 |     |     |     |     | 345 |
| Ile | Phe | Ser | Leu | His | Asn | Leu | Gln | Glu | Ile | Asp | Leu | Lys | Asp | Asn |
|     |     |     |     | 350 |     |     |     |     | 355 |     |     |     |     | 360 |

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Asn | Leu | Lys | Thr | Ile | Glu | Glu | Ile | Ile | Ser | Phe | Gln | His | Leu | His |
|     |     |     |     | 365 |     |     |     |     | 370 |     |     |     |     | 375 |
| Arg | Leu | Thr | Cys | Leu | Lys | Leu | Trp | Tyr | Asn | His | Ile | Ala | Tyr | Ile |
|     |     |     |     | 380 |     |     |     |     | 385 |     |     |     |     | 390 |
| Pro | Ile | Gln | Ile | Gly | Asn | Leu | Thr | Asn | Leu | Glu | Arg | Leu | Tyr | Leu |
|     |     |     |     | 395 |     |     |     |     | 400 |     |     |     |     | 405 |
| Asn | Arg | Asn | Lys | Ile | Glu | Lys | Ile | Pro | Thr | Gln | Leu | Phe | Tyr | Cys |
|     |     |     |     | 410 |     |     |     |     | 415 |     |     |     |     | 420 |
| Arg | Lys | Leu | Arg | Tyr | Leu | Asp | Leu | Ser | His | Asn | Asn | Leu | Thr | Phe |
|     |     |     |     | 425 |     |     |     |     | 430 |     |     |     |     | 435 |
| Leu | Pro | Ala | Asp | Ile | Gly | Leu | Leu | Gln | Asn | Leu | Gln | Asn | Leu | Ala |
|     |     |     |     | 440 |     |     |     |     | 445 |     |     |     |     | 450 |
| Ile | Thr | Ala | Asn | Arg | Ile | Glu | Thr | Leu | Pro | Pro | Glu | Leu | Phe | Gln |
|     |     |     |     | 455 |     |     |     |     | 460 |     |     |     |     | 465 |
| Cys | Arg | Lys | Leu | Arg | Ala | Leu | His | Leu | Gly | Asn | Asn | Val | Leu | Gln |
|     |     |     |     | 470 |     |     |     |     | 475 |     |     |     |     | 480 |
| Ser | Leu | Pro | Ser | Arg | Val | Gly | Glu | Leu | Thr | Asn | Leu | Thr | Gln | Ile |
|     |     |     |     | 485 |     |     |     |     | 490 |     |     |     |     | 495 |
| Glu | Leu | Arg | Gly | Asn | Arg | Leu | Glu | Cys | Leu | Pro | Val | Glu | Leu | Gly |
|     |     |     |     | 500 |     |     |     |     | 505 |     |     |     |     | 510 |
| Glu | Cys | Pro | Leu | Leu | Lys | Arg | Ser | Gly | Leu | Val | Val | Glu | Glu | Asp |
|     |     |     |     | 515 |     |     |     |     | 520 |     |     |     |     | 525 |
| Leu | Phe | Asn | Thr | Leu | Pro | Pro | Glu | Val | Lys | Glu | Arg | Leu | Trp | Arg |
|     |     |     |     | 530 |     |     |     |     | 535 |     |     |     |     | 540 |
| Ala | Asp | Lys | Glu | Gln | Ala |     |     |     |     |     |     |     |     |     |
|     |     |     |     | 545 |     |     |     |     |     |     |     |     |     |     |

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&lt;211&gt; 20

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&lt;400&gt; 251

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&lt;210&gt; 252

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<211> 452

<212> PRT

<213> Homo Sapien

<400> 255

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| Met | Glu | Leu | Ala | Leu | Arg | Arg | Ser | Pro | Val | Pro | Arg | Trp | Leu | Leu |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Leu | Pro | Leu | Leu | Leu | Gly | Leu | Asn | Ala | Gly | Ala | Val | Ile | Asp |
|     |     |     | 20  |     |     |     |     |     | 25  |     |     |     | 30  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Trp | Pro | Thr | Glu | Glu | Gly | Lys | Glu | Val | Trp | Asp | Tyr | Val | Thr | Val |
|     |     |     | 35  |     |     |     |     |     | 40  |     |     |     | 45  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Arg | Lys | Asp | Ala | Tyr | Met | Phe | Trp | Trp | Leu | Tyr | Tyr | Ala | Thr | Asn |  |
|     |     |     |     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |  |
| Ser | Cys | Lys | Asn | Phe | Ser | Glu | Leu | Pro | Leu | Val | Met | Trp | Leu | Gln |  |
|     |     |     |     | 65  |     |     |     |     | 70  |     |     |     |     | 75  |  |
| Gly | Gly | Pro | Gly | Gly | Ser | Ser | Thr | Gly | Phe | Gly | Asn | Phe | Glu | Glu |  |
|     |     |     |     | 80  |     |     |     |     | 85  |     |     |     |     | 90  |  |
| Ile | Gly | Pro | Leu | Asp | Ser | Asp | Leu | Lys | Pro | Arg | Lys | Thr | Thr | Trp |  |
|     |     |     |     | 95  |     |     |     |     | 100 |     |     |     |     | 105 |  |
| Leu | Gln | Ala | Ala | Ser | Leu | Leu | Phe | Val | Asp | Asn | Pro | Val | Gly | Thr |  |
|     |     |     |     | 110 |     |     |     |     | 115 |     |     |     |     | 120 |  |
| Gly | Phe | Ser | Tyr | Val | Asn | Gly | Ser | Gly | Ala | Tyr | Ala | Lys | Asp | Leu |  |
|     |     |     |     | 125 |     |     |     |     | 130 |     |     |     |     | 135 |  |
| Ala | Met | Val | Ala | Ser | Asp | Met | Met | Val | Leu | Leu | Lys | Thr | Phe | Phe |  |
|     |     |     |     | 140 |     |     |     |     | 145 |     |     |     |     | 150 |  |
| Ser | Cys | His | Lys | Glu | Phe | Gln | Thr | Val | Pro | Phe | Tyr | Ile | Phe | Ser |  |
|     |     |     |     | 155 |     |     |     |     | 160 |     |     |     |     | 165 |  |
| Glu | Ser | Tyr | Gly | Gly | Lys | Met | Ala | Ala | Gly | Ile | Gly | Leu | Glu | Leu |  |
|     |     |     |     | 170 |     |     |     |     | 175 |     |     |     |     | 180 |  |
| Tyr | Lys | Ala | Ile | Gln | Arg | Gly | Thr | Ile | Lys | Cys | Asn | Phe | Ala | Gly |  |
|     |     |     |     | 185 |     |     |     |     | 190 |     |     |     |     | 195 |  |
| Val | Ala | Leu | Gly | Asp | Ser | Trp | Ile | Ser | Pro | Val | Asp | Ser | Val | Leu |  |
|     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |     | 210 |  |
| Ser | Trp | Gly | Pro | Tyr | Leu | Tyr | Ser | Met | Ser | Leu | Leu | Glu | Asp | Lys |  |
|     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     | 225 |  |
| Gly | Leu | Ala | Glu | Val | Ser | Lys | Val | Ala | Glu | Gln | Val | Leu | Asn | Ala |  |
|     |     |     |     | 230 |     |     |     |     | 235 |     |     |     |     | 240 |  |
| Val | Asn | Lys | Gly | Leu | Tyr | Arg | Glu | Ala | Thr | Glu | Leu | Trp | Gly | Lys |  |
|     |     |     |     | 245 |     |     |     |     | 250 |     |     |     |     | 255 |  |
| Ala | Glu | Met | Ile | Ile | Glu | Gln | Asn | Thr | Asp | Gly | Val | Asn | Phe | Tyr |  |
|     |     |     |     | 260 |     |     |     |     | 265 |     |     |     |     | 270 |  |
| Asn | Ile | Leu | Thr | Lys | Ser | Thr | Pro | Thr | Ser | Thr | Met | Glu | Ser | Ser |  |
|     |     |     |     | 275 |     |     |     |     | 280 |     |     |     |     | 285 |  |
| Leu | Glu | Phe | Thr | Gln | Ser | His | Leu | Val | Cys | Leu | Cys | Gln | Arg | His |  |
|     |     |     |     | 290 |     |     |     |     | 295 |     |     |     |     | 300 |  |
| Val | Arg | His | Leu | Gln | Arg | Asp | Ala | Leu | Ser | Gln | Leu | Met | Asn | Gly |  |

|                                     |                         |     |
|-------------------------------------|-------------------------|-----|
| 305                                 | 310                     | 315 |
| Pro Ile Arg Lys Lys Leu Lys Ile Ile | Pro Glu Asp Gln Ser Trp |     |
| 320                                 | 325                     | 330 |
| Gly Gly Gln Ala Thr Asn Val Phe Val | Asn Met Glu Glu Asp Phe |     |
| 335                                 | 340                     | 345 |
| Met Lys Pro Val Ile Ser Ile Val Asp | Glu Leu Leu Glu Ala Gly |     |
| 350                                 | 355                     | 360 |
| Ile Asn Val Thr Val Tyr Asn Gly Gln | Leu Asp Leu Ile Val Asp |     |
| 365                                 | 370                     | 375 |
| Thr Met Gly Gln Glu Ala Trp Val Arg | Lys Leu Lys Trp Pro Glu |     |
| 380                                 | 385                     | 390 |
| Leu Pro Lys Phe Ser Gln Leu Lys Trp | Lys Ala Leu Tyr Ser Asp |     |
| 395                                 | 400                     | 405 |
| Pro Lys Ser Leu Glu Thr Ser Ala Phe | Val Lys Ser Tyr Lys Asn |     |
| 410                                 | 415                     | 420 |
| Leu Ala Phe Tyr Trp Ile Leu Lys Ala | Gly His Met Val Pro Ser |     |
| 425                                 | 430                     | 435 |
| Asp Gln Gly Asp Met Ala Leu Lys Met | Met Arg Leu Val Thr Gln |     |
| 440                                 | 445                     | 450 |

Gln Glu

<210> 256

<211> 1100

<212> DNA

<213> Homo Sapien

<400> 256

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tggagaggac gccgaactcg ggcgttggcc gtggcagggg agcctgcgcc 200
tgtgggattc ccacgtatgc ggagtgaacc tgctcagcca ccgctgggca 250
ctcacggcgg cgcactgctt tgaacacctat agtgacctta gtgatccctc 300
cgggtggatg gtccagtttg gccagctgac ttccatgcca tccttctgga 350
gcctgcaggc ctactacacc cgttacttcg tatcgaatat ctatctgagc 400

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Ser Asp Pro Ser Gly Trp Met Val Gln Phe Gly Gln Leu Thr Ser  
 95 100 105  
 Met Pro Ser Phe Trp Ser Leu Gln Ala Tyr Tyr Thr Arg Tyr Phe  
 110 115 120  
 Val Ser Asn Ile Tyr Leu Ser Pro Arg Tyr Leu Gly Asn Ser Pro  
 125 130 135  
 Tyr Asp Ile Ala Leu Val Lys Leu Ser Ala Pro Val Thr Tyr Thr  
 140 145 150  
 Lys His Ile Gln Pro Ile Cys Leu Gln Ala Ser Thr Phe Glu Phe  
 155 160 165  
 Glu Asn Arg Thr Asp Cys Trp Val Thr Gly Trp Gly Tyr Ile Lys  
 170 175 180  
 Glu Asp Glu Ala Leu Pro Ser Pro His Thr Leu Gln Glu Val Gln  
 185 190 195  
 Val Ala Ile Ile Asn Asn Ser Met Cys Asn His Leu Phe Leu Lys  
 200 205 210  
 Tyr Ser Phe Arg Lys Asp Ile Phe Gly Asp Met Val Cys Ala Gly  
 215 220 225  
 Asn Ala Gln Gly Gly Lys Asp Ala Cys Phe Gly Asp Ser Gly Gly  
 230 235 240  
 Pro Leu Ala Cys Asn Lys Asn Gly Leu Trp Tyr Gln Ile Gly Val  
 245 250 255  
 Val Ser Trp Gly Val Gly Cys Gly Arg Pro Asn Arg Pro Gly Val  
 260 265 270  
 Tyr Thr Asn Ile Ser His His Phe Glu Trp Ile Gln Lys Leu Met  
 275 280 285  
 Ala Gln Ser Gly Met Ser Gln Pro Asp Pro Ser Trp Pro Leu Leu  
 290 295 300  
 Phe Phe Pro Leu Leu Trp Ala Leu Pro Leu Leu Gly Pro Val  
 305 310

<210> 258

<211> 2427

<212> DNA

<213> Homo Sapien

<400> 258

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 gagcacagga tccttagtgg ccgccccctt cttggctttc tcaaccaag 1550  
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 aacctgaaa tgctgtgagc ttgacttgac tcccaacctt accatgctcc 1900  
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<210> 259

<211> 556

<212> PRT

<213> Homo Sapien

<400> 259

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Gly | Leu | Gln | Ala | Cys | Leu | Leu | Gly | Leu | Phe | Ala | Leu | Ile | Leu |
| 1   |     |     |     |     | 5   |     |     |     | 10  |     |     |     | 15  |     |

Ser Gly Lys Cys Ser Tyr Ser Pro Glu Pro Asp Gln Arg Arg Thr





Cys

&lt;210&gt; 260

&lt;211&gt; 1638

&lt;212&gt; DNA

&lt;213&gt; Homo Sapien

&lt;400&gt; 260

```

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attccagggc tcctcttccct tctcttcttt ctgctctgtg ctgttgggca 150
agtgcgacct tacagtggcc cctggaaacc cacttggcct gcataccgcc 200
tcctgtgctg cttgccccag tctaccctca atttagccaa gccagacttt 250
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taagggaact ccactgcccc cttacgaaga ggccaagcaa tatctgtctt 350
atgaaacgct ctatgccaat ggcagccgca cagagacgca ggtgggcatc 400
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cccagaagct tcgagtgggc ttcctaaagc ccaagtttaa agatgggtgg 700
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aagccccaca agagaaaatt tatgaagatt ggggtgagcc ctctgtctaa 900
gcagctgcca gggggcgaaa ttcacttctc tggttatgac aatgaccgac 950
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ctatgtgagg atgtggaaga gacagcagca gaagtgggag cgaaaaatta 1100

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0996956.07491

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 ccaaattggt ttttgtcatt ggcgtgcaca cgtgtgtgtg tgtgtgtgtg 1350  
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<210> 261

<211> 383

<212> PRT

<213> Homo Sapien

<400> 261

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
| Met | Ala | Gly | Ile | Pro | Gly | Leu | Leu | Phe | Leu | Leu | Phe | Phe | Leu | Leu | 1   | 5   | 10  | 15 |
| Cys | Ala | Val | Gly | Gln | Val | Ser | Pro | Tyr | Ser | Ala | Pro | Trp | Lys | Pro | 20  | 25  | 30  |    |
| Thr | Trp | Pro | Ala | Tyr | Arg | Leu | Pro | Val | Val | Leu | Pro | Gln | Ser | Thr | 35  | 40  | 45  |    |
| Leu | Asn | Leu | Ala | Lys | Pro | Asp | Phe | Gly | Ala | Glu | Ala | Lys | Leu | Glu | 50  | 55  | 60  |    |
| Val | Ser | Ser | Ser | Cys | Gly | Pro | Gln | Cys | His | Lys | Gly | Thr | Pro | Leu | 65  | 70  | 75  |    |
| Pro | Thr | Tyr | Glu | Glu | Ala | Lys | Gln | Tyr | Leu | Ser | Tyr | Glu | Thr | Leu | 80  | 85  | 90  |    |
| Tyr | Ala | Asn | Gly | Ser | Arg | Thr | Glu | Thr | Gln | Val | Gly | Ile | Tyr | Ile | 95  | 100 | 105 |    |
| Leu | Ser | Ser | Ser | Gly | Asp | Gly | Ala | Gln | His | Arg | Asp | Ser | Gly | Ser | 110 | 115 | 120 |    |





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 <211> 1378  
 <212> DNA  
 <213> Homo Sapien

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<210> 263

<211> 317

<212> PRT

<213> Homo Sapien

<400> 263

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
| Met | Val | Val | Ser | Gly | Ala | Pro | Pro | Ala | Leu | Gly | Gly | Gly | Cys | Leu | 1   | 5   | 10  | 15 |
| Gly | Thr | Phe | Thr | Ser | Leu | Leu | Leu | Leu | Ala | Ser | Thr | Ala | Ile | Leu | 20  | 25  | 30  |    |
| Asn | Ala | Ala | Arg | Ile | Pro | Val | Pro | Pro | Ala | Cys | Gly | Lys | Pro | Gln | 35  | 40  | 45  |    |
| Gln | Leu | Asn | Arg | Val | Val | Gly | Gly | Glu | Asp | Ser | Thr | Asp | Ser | Glu | 50  | 55  | 60  |    |
| Trp | Pro | Trp | Ile | Val | Ser | Ile | Gln | Lys | Asn | Gly | Thr | His | His | Cys | 65  | 70  | 75  |    |
| Ala | Gly | Ser | Leu | Leu | Thr | Ser | Arg | Trp | Val | Ile | Thr | Ala | Ala | His | 80  | 85  | 90  |    |
| Cys | Phe | Lys | Asp | Asn | Leu | Asn | Lys | Pro | Tyr | Leu | Phe | Ser | Val | Leu | 95  | 100 | 105 |    |
| Leu | Gly | Ala | Trp | Gln | Leu | Gly | Asn | Pro | Gly | Ser | Arg | Ser | Gln | Lys | 110 | 115 | 120 |    |
| Val | Gly | Val | Ala | Trp | Val | Glu | Pro | His | Pro | Val | Tyr | Ser | Trp | Lys | 125 | 130 | 135 |    |
| Glu | Gly | Ala | Cys | Ala | Asp | Ile | Ala | Leu | Val | Arg | Leu | Glu | Arg | Ser | 140 | 145 | 150 |    |
| Ile | Gln | Phe | Ser | Glu | Arg | Val | Leu | Pro | Ile | Cys | Leu | Pro | Asp | Ala | 155 | 160 | 165 |    |
| Ser | Ile | His | Leu | Pro | Pro | Asn | Thr | His | Cys | Trp | Ile | Ser | Gly | Trp | 170 | 175 | 180 |    |

09905055-074304





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<211> 26  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic Oligonucleotide Probe

<400> 271  
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<210> 272  
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<400> 272  
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<210> 273  
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<223> Synthetic Oligonucleotide Probe

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<210> 281

<211> 34

<212> DNA

<213> Artificial Sequence

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<223> Synthetic Oligonucleotide Probe

<400> 281

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<210> 282

<211> 61

<212> DNA

<213> Artificial Sequence

<220>

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<400> 282

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<210> 283

<211> 119

<212> DNA

<213> Artificial Sequence

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<223> Synthetic Oligonucleotide Probe

<400> 283

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atgctgtgtg ccggctact 119

<210> 284

<211> 1875

<212> DNA

<213> Homo Sapien

<400> 284

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ccgctactgc tactgctggt ggccaccaca ggccccgttg gagccctcac 100



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 cacgcagggtg gtatgggcca agacagagag gatcggctgt ggttcccact 450  
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<211> 463

<212> PRT

<213> Homo Sapien

<400> 285

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
| Met | His | Gly | Ser | Cys | Ser | Phe | Leu | Met | Leu | Leu | Leu | Pro | Leu | Leu | 1   | 5   | 10  | 15 |
| Leu | Leu | Leu | Val | Ala | Thr | Thr | Gly | Pro | Val | Gly | Ala | Leu | Thr | Asp | 20  | 25  | 30  |    |
| Glu | Glu | Lys | Arg | Leu | Met | Val | Glu | Leu | His | Asn | Leu | Tyr | Arg | Ala | 35  | 40  | 45  |    |
| Gln | Val | Ser | Pro | Thr | Ala | Ser | Asp | Met | Leu | His | Met | Arg | Trp | Asp | 50  | 55  | 60  |    |
| Glu | Glu | Leu | Ala | Ala | Phe | Ala | Lys | Ala | Tyr | Ala | Arg | Gln | Cys | Val | 65  | 70  | 75  |    |
| Trp | Gly | His | Asn | Lys | Glu | Arg | Gly | Arg | Arg | Gly | Glu | Asn | Leu | Phe | 80  | 85  | 90  |    |
| Ala | Ile | Thr | Asp | Glu | Gly | Met | Asp | Val | Pro | Leu | Ala | Met | Glu | Glu | 95  | 100 | 105 |    |
| Trp | His | His | Glu | Arg | Glu | His | Tyr | Asn | Leu | Ser | Ala | Ala | Thr | Cys | 110 | 115 | 120 |    |
| Ser | Pro | Gly | Gln | Met | Cys | Gly | His | Tyr | Thr | Gln | Val | Val | Trp | Ala | 125 | 130 | 135 |    |

F02749-95050660

|   |     |     |     |
|---|-----|-----|-----|
| Lys Thr Glu Arg Ile Gly Cys Gly Ser His Phe Cys Glu Lys Leu | 140 | 145 | 150 |
| Gln Gly Val Glu Glu Thr Asn Ile Glu Leu Leu Val Cys Asn Tyr | 155 | 160 | 165 |
| Glu Pro Pro Gly Asn Val Lys Gly Lys Arg Pro Tyr Gln Glu Gly | 170 | 175 | 180 |
| Thr Pro Cys Ser Gln Cys Pro Ser Gly Tyr His Cys Lys Asn Ser | 185 | 190 | 195 |
| Leu Cys Glu Pro Ile Gly Ser Pro Glu Asp Ala Gln Asp Leu Pro | 200 | 205 | 210 |
| Tyr Leu Val Thr Glu Ala Pro Ser Phe Arg Ala Thr Glu Ala Ser | 215 | 220 | 225 |
| Asp Ser Arg Lys Met Gly Thr Pro Ser Ser Leu Ala Thr Gly Ile | 230 | 235 | 240 |
| Pro Ala Phe Leu Val Thr Glu Val Ser Gly Ser Leu Ala Thr Lys | 245 | 250 | 255 |
| Ala Leu Pro Ala Val Glu Thr Gln Ala Pro Thr Ser Leu Ala Thr | 260 | 265 | 270 |
| Lys Asp Pro Pro Ser Met Ala Thr Glu Ala Pro Pro Cys Val Thr | 275 | 280 | 285 |
| Thr Glu Val Pro Ser Ile Leu Ala Ala His Ser Leu Pro Ser Leu | 290 | 295 | 300 |
| Asp Glu Glu Pro Val Thr Phe Pro Lys Ser Thr His Val Pro Ile | 305 | 310 | 315 |
| Pro Lys Ser Ala Asp Lys Val Thr Asp Lys Thr Lys Val Pro Ser | 320 | 325 | 330 |
| Arg Ser Pro Glu Asn Ser Leu Asp Pro Lys Met Ser Leu Thr Gly | 335 | 340 | 345 |
| Ala Arg Glu Leu Leu Pro His Ala Gln Glu Glu Ala Glu Ala Glu | 350 | 355 | 360 |
| Ala Glu Leu Pro Pro Ser Ser Glu Val Leu Ala Ser Val Phe Pro | 365 | 370 | 375 |
| Ala Gln Asp Lys Pro Gly Glu Leu Gln Ala Thr Leu Asp His Thr | 380 | 385 | 390 |
| Gly His Thr Ser Ser Lys Ser Leu Pro Asn Phe Pro Asn Thr Ser | 395 | 400 | 405 |

09905056-07341

Ala Thr Ala Asn Ala Thr Gly Gly Arg Ala Leu Ala Leu Gln Ser  
410 415 420

Ser Leu Pro Gly Ala Glu Gly Pro Asp Lys Pro Ser Val Val Ser  
425 430 435

Gly Leu Asn Ser Gly Pro Gly His Val Trp Gly Pro Leu Leu Gly  
440 445 450

Leu Leu Leu Leu Pro Pro Leu Val Leu Ala Gly Ile Phe  
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<211> 19

<212> DNA

<213> Artificial Sequence

<220>

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<400> 286

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<210> 287

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 287

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<210> 288

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 288

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<210> 289

<211> 3662

<212> DNA

<213> Homo Sapien

<400> 289

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<211> 1059

<212> PRT

<213> Homo Sapien

<400> 290

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Val | Asp | Val | Leu | Leu | Leu | Phe | Ser | Leu | Cys | Leu | Leu | Phe | His |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ile | Ser | Arg | Pro | Asp | Leu | Ser | His | Asn | Arg | Leu | Ser | Phe | Ile | Lys |
|     |     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |

09065066-071204

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Ser | Ser | Met | Ser | His | Leu | Gln | Ser | Leu | Arg | Glu | Val | Lys | Leu | 35  | 40  | 45  |
| Asn | Asn | Asn | Glu | Leu | Glu | Thr | Ile | Pro | Asn | Leu | Gly | Pro | Val | Ser | 50  | 55  | 60  |
| Ala | Asn | Ile | Thr | Leu | Leu | Ser | Leu | Ala | Gly | Asn | Arg | Ile | Val | Glu | 65  | 70  | 75  |
| Ile | Leu | Pro | Glu | His | Leu | Lys | Glu | Phe | Gln | Ser | Leu | Glu | Thr | Leu | 80  | 85  | 90  |
| Asp | Leu | Ser | Ser | Asn | Asn | Ile | Ser | Glu | Leu | Gln | Thr | Ala | Phe | Pro | 95  | 100 | 105 |
| Ala | Leu | Gln | Leu | Lys | Tyr | Leu | Tyr | Leu | Asn | Ser | Asn | Arg | Val | Thr | 110 | 115 | 120 |
| Ser | Met | Glu | Pro | Gly | Tyr | Phe | Asp | Asn | Leu | Ala | Asn | Thr | Leu | Leu | 125 | 130 | 135 |
| Val | Leu | Lys | Leu | Asn | Arg | Asn | Arg | Ile | Ser | Ala | Ile | Pro | Pro | Lys | 140 | 145 | 150 |
| Met | Phe | Lys | Leu | Pro | Gln | Leu | Gln | His | Leu | Glu | Leu | Asn | Arg | Asn | 155 | 160 | 165 |
| Lys | Ile | Lys | Asn | Val | Asp | Gly | Leu | Thr | Phe | Gln | Gly | Leu | Gly | Ala | 170 | 175 | 180 |
| Leu | Lys | Ser | Leu | Lys | Met | Gln | Arg | Asn | Gly | Val | Thr | Lys | Leu | Met | 185 | 190 | 195 |
| Asp | Gly | Ala | Phe | Trp | Gly | Leu | Ser | Asn | Met | Glu | Ile | Leu | Gln | Leu | 200 | 205 | 210 |
| Asp | His | Asn | Asn | Leu | Thr | Glu | Ile | Thr | Lys | Gly | Trp | Leu | Tyr | Gly | 215 | 220 | 225 |
| Leu | Leu | Met | Leu | Gln | Glu | Leu | His | Leu | Ser | Gln | Asn | Ala | Ile | Asn | 230 | 235 | 240 |
| Arg | Ile | Ser | Pro | Asp | Ala | Trp | Glu | Phe | Cys | Gln | Lys | Leu | Ser | Glu | 245 | 250 | 255 |
| Leu | Asp | Leu | Thr | Phe | Asn | His | Leu | Ser | Arg | Leu | Asp | Asp | Ser | Ser | 260 | 265 | 270 |
| Phe | Leu | Gly | Leu | Ser | Leu | Leu | Asn | Thr | Leu | His | Ile | Gly | Asn | Asn | 275 | 280 | 285 |
| Arg | Val | Ser | Tyr | Ile | Ala | Asp | Cys | Ala | Phe | Arg | Gly | Leu | Ser | Ser |     |     |     |

09905056-071201



|   |     |  |     |  |     |
|---|-----|--|-----|--|-----|
|   | 290 |  | 295 |  | 300 |
| Leu Lys Thr Leu Asp Leu Lys Asn Asn Glu Ile Ser Trp Thr Ile | 305 |  | 310 |  | 315 |
| Glu Asp Met Asn Gly Ala Phe Ser Gly Leu Asp Lys Leu Arg Arg | 320 |  | 325 |  | 330 |
| Leu Ile Leu Gln Gly Asn Arg Ile Arg Ser Ile Thr Lys Lys Ala | 335 |  | 340 |  | 345 |
| Phe Thr Gly Leu Asp Ala Leu Glu His Leu Asp Leu Ser Asp Asn | 350 |  | 355 |  | 360 |
| Ala Ile Met Ser Leu Gln Gly Asn Ala Phe Ser Gln Met Lys Lys | 365 |  | 370 |  | 375 |
| Leu Gln Gln Leu His Leu Asn Thr Ser Ser Leu Leu Cys Asp Cys | 380 |  | 385 |  | 390 |
| Gln Leu Lys Trp Leu Pro Gln Trp Val Ala Glu Asn Asn Phe Gln | 395 |  | 400 |  | 405 |
| Ser Phe Val Asn Ala Ser Cys Ala His Pro Gln Leu Leu Lys Gly | 410 |  | 415 |  | 420 |
| Arg Ser Ile Phe Ala Val Ser Pro Asp Gly Phe Val Cys Asp Asp | 425 |  | 430 |  | 435 |
| Phe Pro Lys Pro Gln Ile Thr Val Gln Pro Glu Thr Gln Ser Ala | 440 |  | 445 |  | 450 |
| Ile Lys Gly Ser Asn Leu Ser Phe Ile Cys Ser Ala Ala Ser Ser | 455 |  | 460 |  | 465 |
| Ser Asp Ser Pro Met Thr Phe Ala Trp Lys Lys Asp Asn Glu Leu | 470 |  | 475 |  | 480 |
| Leu His Asp Ala Glu Met Glu Asn Tyr Ala His Leu Arg Ala Gln | 485 |  | 490 |  | 495 |
| Gly Gly Glu Val Met Glu Tyr Thr Thr Ile Leu Arg Leu Arg Glu | 500 |  | 505 |  | 510 |
| Val Glu Phe Ala Ser Glu Gly Lys Tyr Gln Cys Val Ile Ser Asn | 515 |  | 520 |  | 525 |
| His Phe Gly Ser Ser Tyr Ser Val Lys Ala Lys Leu Thr Val Asn | 530 |  | 535 |  | 540 |
| Met Leu Pro Ser Phe Thr Lys Thr Pro Met Asp Leu Thr Ile Arg | 545 |  | 550 |  | 555 |

09905055-074204

|                 |                     |                     |     |
|-----------------|---------------------|---------------------|-----|
| Ala Gly Ala Met | Ala Arg Leu Glu Cys | Ala Ala Val Gly His | Pro |
| 560             | 565                 |                     | 570 |
| Ala Pro Gln Ile | Ala Trp Gln Lys Asp | Gly Gly Thr Asp Phe | Pro |
| 575             | 580                 |                     | 585 |
| Ala Ala Arg Glu | Arg Arg Met His Val | Met Pro Glu Asp Asp | Val |
| 590             | 595                 |                     | 600 |
| Phe Phe Ile Val | Asp Val Lys Ile Glu | Asp Ile Gly Val Tyr | Ser |
| 605             | 610                 |                     | 615 |
| Cys Thr Ala Gln | Asn Ser Ala Gly Ser | Ile Ser Ala Asn Ala | Thr |
| 620             | 625                 |                     | 630 |
| Leu Thr Val Leu | Glu Thr Pro Ser Phe | Leu Arg Pro Leu Leu | Asp |
| 635             | 640                 |                     | 645 |
| Arg Thr Val Thr | Lys Gly Glu Thr Ala | Val Leu Gln Cys Ile | Ala |
| 650             | 655                 |                     | 660 |
| Gly Gly Ser Pro | Pro Pro Lys Leu Asn | Trp Thr Lys Asp Asp | Ser |
| 665             | 670                 |                     | 675 |
| Pro Leu Val Val | Thr Glu Arg His Phe | Phe Ala Ala Gly Asn | Gln |
| 680             | 685                 |                     | 690 |
| Leu Leu Ile Ile | Val Asp Ser Asp Val | Ser Asp Ala Gly Lys | Tyr |
| 695             | 700                 |                     | 705 |
| Thr Cys Glu Met | Ser Asn Thr Leu Gly | Thr Glu Arg Gly Asn | Val |
| 710             | 715                 |                     | 720 |
| Arg Leu Ser Val | Ile Pro Thr Pro Thr | Cys Asp Ser Pro Gln | Met |
| 725             | 730                 |                     | 735 |
| Thr Ala Pro Ser | Leu Asp Asp Asp Gly | Trp Ala Thr Val Gly | Val |
| 740             | 745                 |                     | 750 |
| Val Ile Ile Ala | Val Val Cys Cys Val | Val Gly Thr Ser Leu | Val |
| 755             | 760                 |                     | 765 |
| Trp Val Val Ile | Ile Tyr His Thr Arg | Arg Arg Asn Glu Asp | Cys |
| 770             | 775                 |                     | 780 |
| Ser Ile Thr Asn | Thr Asp Glu Thr Asn | Leu Pro Ala Asp Ile | Pro |
| 785             | 790                 |                     | 795 |
| Ser Tyr Leu Ser | Ser Gln Gly Thr Leu | Ala Asp Arg Gln Asp | Gly |
| 800             | 805                 |                     | 810 |

09905056-074301

Tyr Val Ser Ser Glu Ser Gly Ser His His Gln Phe Val Thr Ser  
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 Ser Gly Ala Gly Phe Phe Leu Pro Gln His Asp Ser Ser Gly Thr  
 830 835 840  
 Cys His Ile Asp Asn Ser Ser Glu Ala Asp Val Glu Ala Ala Thr  
 845 850 855  
 Asp Leu Phe Leu Cys Pro Phe Leu Gly Ser Thr Gly Pro Met Tyr  
 860 865 870  
 Leu Lys Gly Asn Val Tyr Gly Ser Asp Pro Phe Glu Thr Tyr His  
 875 880 885  
 Thr Gly Cys Ser Pro Asp Pro Arg Thr Val Leu Met Asp His Tyr  
 890 895 900  
 Glu Pro Ser Tyr Ile Lys Lys Lys Glu Cys Tyr Pro Cys Ser His  
 905 910 915  
 Pro Ser Glu Glu Ser Cys Glu Arg Ser Phe Ser Asn Ile Ser Trp  
 920 925 930  
 Pro Ser His Val Arg Lys Leu Leu Asn Thr Ser Tyr Ser His Asn  
 935 940 945  
 Glu Gly Pro Gly Met Lys Asn Leu Cys Leu Asn Lys Ser Ser Leu  
 950 955 960  
 Asp Phe Ser Ala Asn Pro Glu Pro Ala Ser Val Ala Ser Ser Asn  
 965 970 975  
 Ser Phe Met Gly Thr Phe Gly Lys Ala Leu Arg Arg Pro His Leu  
 980 985 990  
 Asp Ala Tyr Ser Ser Phe Gly Gln Pro Ser Asp Cys Gln Pro Arg  
 995 1000 1005  
 Ala Phe Tyr Leu Lys Ala His Ser Ser Pro Asp Leu Asp Ser Gly  
 1010 1015 1020  
 Ser Glu Glu Asp Gly Lys Glu Arg Thr Asp Phe Gln Glu Glu Asn  
 1025 1030 1035  
 His Ile Cys Thr Phe Lys Gln Thr Leu Glu Asn Tyr Arg Thr Pro  
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&lt;211&gt; 2906

09905056 071201  
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&lt;212&gt; DNA

&lt;213&gt; Homo Sapien

&lt;400&gt; 291

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<212> PRT

<213> Homo Sapien

<400> 292

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Leu | Asn | Lys | Met | Thr | Leu | His | Pro | Gln | Gln | Ile | Met | Ile | Gly |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     |     | 15  |
| Pro | Arg | Phe | Asn | Arg | Ala | Leu | Phe | Asp | Pro | Leu | Leu | Val | Val | Leu |
|     |     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |
| Leu | Ala | Leu | Gln | Leu | Leu | Val | Val | Ala | Gly | Leu | Val | Arg | Ala | Gln |
|     |     |     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |
| Thr | Cys | Pro | Ser | Val | Cys | Ser | Cys | Ser | Asn | Gln | Phe | Ser | Lys | Val |
|     |     |     |     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |
| Ile | Cys | Val | Arg | Lys | Asn | Leu | Arg | Glu | Val | Pro | Asp | Gly | Ile | Ser |
|     |     |     |     | 65  |     |     |     |     | 70  |     |     |     |     | 75  |
| Thr | Asn | Thr | Arg | Leu | Leu | Asn | Leu | His | Glu | Asn | Gln | Ile | Gln | Ile |
|     |     |     |     | 80  |     |     |     |     | 85  |     |     |     |     | 90  |
| Ile | Lys | Val | Asn | Ser | Phe | Lys | His | Leu | Arg | His | Leu | Glu | Ile | Leu |
|     |     |     |     | 95  |     |     |     |     | 100 |     |     |     |     | 105 |
| Gln | Leu | Ser | Arg | Asn | His | Ile | Arg | Thr | Ile | Glu | Ile | Gly | Ala | Phe |
|     |     |     |     | 110 |     |     |     |     | 115 |     |     |     |     | 120 |
| Asn | Gly | Leu | Ala | Asn | Leu | Asn | Thr | Leu | Glu | Leu | Phe | Asp | Asn | Arg |
|     |     |     |     | 125 |     |     |     |     | 130 |     |     |     |     | 135 |
| Leu | Thr | Thr | Ile | Pro | Asn | Gly | Ala | Phe | Val | Tyr | Leu | Ser | Lys | Leu |
|     |     |     |     | 140 |     |     |     |     | 145 |     |     |     |     | 150 |
| Lys | Glu | Leu | Trp | Leu | Arg | Asn | Asn | Pro | Ile | Glu | Ser | Ile | Pro | Ser |

|     |     |     |     |            |     |     |     |     |            |     |     |     |     |            |
|-----|-----|-----|-----|------------|-----|-----|-----|-----|------------|-----|-----|-----|-----|------------|
|     |     |     |     | 155        |     |     |     |     | 160        |     |     |     |     | 165        |
| Tyr | Ala | Phe | Asn | Arg<br>170 | Ile | Pro | Ser | Leu | Arg<br>175 | Arg | Leu | Asp | Leu | Gly<br>180 |
| Glu | Leu | Lys | Arg | Leu<br>185 | Ser | Tyr | Ile | Ser | Glu<br>190 | Gly | Ala | Phe | Glu | Gly<br>195 |
| Leu | Ser | Asn | Leu | Arg<br>200 | Tyr | Leu | Asn | Leu | Ala<br>205 | Met | Cys | Asn | Leu | Arg<br>210 |
| Glu | Ile | Pro | Asn | Leu<br>215 | Thr | Pro | Leu | Ile | Lys<br>220 | Leu | Asp | Glu | Leu | Asp<br>225 |
| Leu | Ser | Gly | Asn | His<br>230 | Leu | Ser | Ala | Ile | Arg<br>235 | Pro | Gly | Ser | Phe | Gln<br>240 |
| Gly | Leu | Met | His | Leu<br>245 | Gln | Lys | Leu | Trp | Met<br>250 | Ile | Gln | Ser | Gln | Ile<br>255 |
| Gln | Val | Ile | Glu | Arg<br>260 | Asn | Ala | Phe | Asp | Asn<br>265 | Leu | Gln | Ser | Leu | Val<br>270 |
| Glu | Ile | Asn | Leu | Ala<br>275 | His | Asn | Asn | Leu | Thr<br>280 | Leu | Leu | Pro | His | Asp<br>285 |
| Leu | Phe | Thr | Pro | Leu<br>290 | His | His | Leu | Glu | Arg<br>295 | Ile | His | Leu | His | His<br>300 |
| Asn | Pro | Trp | Asn | Cys<br>305 | Asn | Cys | Asp | Ile | Leu<br>310 | Trp | Leu | Ser | Trp | Trp<br>315 |
| Ile | Lys | Asp | Met | Ala<br>320 | Pro | Ser | Asn | Thr | Ala<br>325 | Cys | Cys | Ala | Arg | Cys<br>330 |
| Asn | Thr | Pro | Pro | Asn<br>335 | Leu | Lys | Gly | Arg | Tyr<br>340 | Ile | Gly | Glu | Leu | Asp<br>345 |
| Gln | Asn | Tyr | Phe | Thr<br>350 | Cys | Tyr | Ala | Pro | Val<br>355 | Ile | Val | Glu | Pro | Pro<br>360 |
| Ala | Asp | Leu | Asn | Val<br>365 | Thr | Glu | Gly | Met | Ala<br>370 | Ala | Glu | Leu | Lys | Cys<br>375 |
| Arg | Ala | Ser | Thr | Ser<br>380 | Leu | Thr | Ser | Val | Ser<br>385 | Trp | Ile | Thr | Pro | Asn<br>390 |
| Gly | Thr | Val | Met | Thr<br>395 | His | Gly | Ala | Tyr | Lys<br>400 | Val | Arg | Ile | Ala | Val<br>405 |
| Leu | Ser | Asp | Gly | Thr<br>410 | Leu | Asn | Phe | Thr | Asn<br>415 | Val | Thr | Val | Gln | Asp<br>420 |

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&lt;211&gt; 4053

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|                                     |                         |  |     |  |     |
|-------------------------------------|-------------------------|--|-----|--|-----|
|                                     | 215                     |  | 220 |  | 225 |
| Lys Ile Lys Asn Val Asp Gly Leu Thr | Phe Gln Gly Leu Gly Ala |  |     |  |     |
| 230                                 | 235                     |  |     |  | 240 |
| Leu Lys Ser Leu Lys Met Gln Arg Asn | Gly Val Thr Lys Leu Met |  |     |  |     |
| 245                                 | 250                     |  |     |  | 255 |
| Asp Gly Ala Phe Trp Gly Leu Ser Asn | Met Glu Ile Leu Gln Leu |  |     |  |     |
| 260                                 | 265                     |  |     |  | 270 |
| Asp His Asn Asn Leu Thr Glu Ile Thr | Lys Gly Trp Leu Tyr Gly |  |     |  |     |
| 275                                 | 280                     |  |     |  | 285 |
| Leu Leu Met Leu Gln Glu Leu His Leu | Ser Gln Asn Ala Ile Asn |  |     |  |     |
| 290                                 | 295                     |  |     |  | 300 |
| Arg Ile Ser Pro Asp Ala Trp Glu Phe | Cys Gln Lys Leu Ser Glu |  |     |  |     |
| 305                                 | 310                     |  |     |  | 315 |
| Leu Asp Leu Thr Phe Asn His Leu Ser | Arg Leu Asp Asp Ser Ser |  |     |  |     |
| 320                                 | 325                     |  |     |  | 330 |
| Phe Leu Gly Leu Ser Leu Leu Asn Thr | Leu His Ile Gly Asn Asn |  |     |  |     |
| 335                                 | 340                     |  |     |  | 345 |
| Arg Val Ser Tyr Ile Ala Asp Cys Ala | Phe Arg Gly Leu Ser Ser |  |     |  |     |
| 350                                 | 355                     |  |     |  | 360 |
| Leu Lys Thr Leu Asp Leu Lys Asn Asn | Glu Ile Ser Trp Thr Ile |  |     |  |     |
| 365                                 | 370                     |  |     |  | 375 |
| Glu Asp Met Asn Gly Ala Phe Ser Gly | Leu Asp Lys Leu Arg Arg |  |     |  |     |
| 380                                 | 385                     |  |     |  | 390 |
| Leu Ile Leu Gln Gly Asn Arg Ile Arg | Ser Ile Thr Lys Lys Ala |  |     |  |     |
| 395                                 | 400                     |  |     |  | 405 |
| Phe Thr Gly Leu Asp Ala Leu Glu His | Leu Asp Leu Ser Asp Asn |  |     |  |     |
| 410                                 | 415                     |  |     |  | 420 |
| Ala Ile Met Ser Leu Gln Gly Asn Ala | Phe Ser Gln Met Lys Lys |  |     |  |     |
| 425                                 | 430                     |  |     |  | 435 |
| Leu Gln Gln Leu His Leu Asn Thr Ser | Ser Leu Leu Cys Asp Cys |  |     |  |     |
| 440                                 | 445                     |  |     |  | 450 |
| Gln Leu Lys Trp Leu Pro Gln Trp Val | Ala Glu Asn Asn Phe Gln |  |     |  |     |
| 455                                 | 460                     |  |     |  | 465 |
| Ser Phe Val Asn Ala Ser Cys Ala His | Pro Gln Leu Leu Lys Gly |  |     |  |     |
| 470                                 | 475                     |  |     |  | 480 |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Arg | Ser | Ile | Phe | Ala | Val | Ser | Pro | Asp | Gly | Phe | Val | Cys | Asp | Asp |  |
|     |     |     |     | 485 |     |     |     |     | 490 |     |     |     |     | 495 |  |
| Phe | Pro | Lys | Pro | Gln | Ile | Thr | Val | Gln | Pro | Glu | Thr | Gln | Ser | Ala |  |
|     |     |     |     | 500 |     |     |     |     | 505 |     |     |     |     | 510 |  |
| Ile | Lys | Gly | Ser | Asn | Leu | Ser | Phe | Ile | Cys | Ser | Ala | Ala | Ser | Ser |  |
|     |     |     |     | 515 |     |     |     |     | 520 |     |     |     |     | 525 |  |
| Ser | Asp | Ser | Pro | Met | Thr | Phe | Ala | Trp | Lys | Lys | Asp | Asn | Glu | Leu |  |
|     |     |     |     | 530 |     |     |     |     | 535 |     |     |     |     | 540 |  |
| Leu | His | Asp | Ala | Glu | Met | Glu | Asn | Tyr | Ala | His | Leu | Arg | Ala | Gln |  |
|     |     |     |     | 545 |     |     |     |     | 550 |     |     |     |     | 555 |  |
| Gly | Gly | Glu | Val | Met | Glu | Tyr | Thr | Thr | Ile | Leu | Arg | Leu | Arg | Glu |  |
|     |     |     |     | 560 |     |     |     |     | 565 |     |     |     |     | 570 |  |
| Val | Glu | Phe | Ala | Ser | Glu | Gly | Lys | Tyr | Gln | Cys | Val | Ile | Ser | Asn |  |
|     |     |     |     | 575 |     |     |     |     | 580 |     |     |     |     | 585 |  |
| His | Phe | Gly | Ser | Ser | Tyr | Ser | Val | Lys | Ala | Lys | Leu | Thr | Val | Asn |  |
|     |     |     |     | 590 |     |     |     |     | 595 |     |     |     |     | 600 |  |
| Met | Leu | Pro | Ser | Phe | Thr | Lys | Thr | Pro | Met | Asp | Leu | Thr | Ile | Arg |  |
|     |     |     |     | 605 |     |     |     |     | 610 |     |     |     |     | 615 |  |
| Ala | Gly | Ala | Met | Ala | Arg | Leu | Glu | Cys | Ala | Ala | Val | Gly | His | Pro |  |
|     |     |     |     | 620 |     |     |     |     | 625 |     |     |     |     | 630 |  |
| Ala | Pro | Gln | Ile | Ala | Trp | Gln | Lys | Asp | Gly | Gly | Thr | Asp | Phe | Pro |  |
|     |     |     |     | 635 |     |     |     |     | 640 |     |     |     |     | 645 |  |
| Ala | Ala | Arg | Glu | Arg | Arg | Met | His | Val | Met | Pro | Glu | Asp | Asp | Val |  |
|     |     |     |     | 650 |     |     |     |     | 655 |     |     |     |     | 660 |  |
| Phe | Phe | Ile | Val | Asp | Val | Lys | Ile | Glu | Asp | Ile | Gly | Val | Tyr | Ser |  |
|     |     |     |     | 665 |     |     |     |     | 670 |     |     |     |     | 675 |  |
| Cys | Thr | Ala | Gln | Asn | Ser | Ala | Gly | Ser | Ile | Ser | Ala | Asn | Ala | Thr |  |
|     |     |     |     | 680 |     |     |     |     | 685 |     |     |     |     | 690 |  |
| Leu | Thr | Val | Leu | Glu | Thr | Pro | Ser | Phe | Leu | Arg | Pro | Leu | Leu | Asp |  |
|     |     |     |     | 695 |     |     |     |     | 700 |     |     |     |     | 705 |  |
| Arg | Thr | Val | Thr | Lys | Gly | Glu | Thr | Ala | Val | Leu | Gln | Cys | Ile | Ala |  |
|     |     |     |     | 710 |     |     |     |     | 715 |     |     |     |     | 720 |  |
| Gly | Gly | Ser | Pro | Pro | Pro | Lys | Leu | Asn | Trp | Thr | Lys | Asp | Asp | Ser |  |
|     |     |     |     | 725 |     |     |     |     | 730 |     |     |     |     | 735 |  |
| Pro | Leu | Val | Val | Thr | Glu | Arg | His | Phe | Phe | Ala | Ala | Gly | Asn | Gln |  |
|     |     |     |     | 740 |     |     |     |     | 745 |     |     |     |     | 750 |  |



|   |      |      |
|---|------|------|
| 1010  | 1015 | 1020 |
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| 1025  | 1030 | 1035 |
| Ser Phe Met Gly Thr Phe Gly Lys Ala Leu Arg Arg Pro His Leu |      |      |
| 1040  | 1045 | 1050 |
| Asp Ala Tyr Ser Ser Phe Gly Gln Pro Ser Asp Cys Gln Pro Arg |      |      |
| 1055  | 1060 | 1065 |
| Ala Phe Tyr Leu Lys Ala His Ser Ser Pro Asp Leu Asp Ser Gly |      |      |
| 1070  | 1075 | 1080 |
| Ser Glu Glu Asp Gly Lys Glu Arg Thr Asp Phe Gln Glu Glu Asn |      |      |
| 1085  | 1090 | 1095 |
| His Ile Cys Thr Phe Lys Gln Thr Leu Glu Asn Tyr Arg Thr Pro |      |      |
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| Asn Phe Gln Ser Tyr Asp Leu Asp Thr                         |      |      |
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<220>  
 <223> Synthetic Oligonucleotide Probe

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<210> 313  
 <211> 45  
 <212> DNA  
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<220>  
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<400> 313  
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<210> 314  
 <211> 3003  
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 <213> Homo Sapien

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gtggatggat cagggagaaa gacaatgact tgcactggga accaatcagg 1450  
 gacccagcag gtggacaata tctgacagtg tcggcagcca aagccccagg 1500  
 gggaaaagct gcacgcttgg tgctacctct cggccgcctc atgcattcag 1550  
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<210> 315

<211> 509

<212> PRT

<213> Homo Sapien

<400> 315

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
| Met | Asp | Phe | Leu | Leu | Ala | Leu | Val | Leu | Val | Ser | Ser | Leu | Tyr | Leu | 1   | 5   | 10  | 15 |
| Gln | Ala | Ala | Ala | Glu | Phe | Asp | Gly | Arg | Trp | Pro | Arg | Gln | Ile | Val | 20  | 25  | 30  |    |
| Ser | Ser | Ile | Gly | Leu | Cys | Arg | Tyr | Gly | Gly | Arg | Ile | Asp | Cys | Cys | 35  | 40  | 45  |    |
| Trp | Gly | Trp | Ala | Arg | Gln | Ser | Trp | Gly | Gln | Cys | Gln | Pro | Val | Cys | 50  | 55  | 60  |    |
| Gln | Pro | Arg | Cys | Lys | His | Gly | Glu | Cys | Ile | Gly | Pro | Asn | Lys | Cys | 65  | 70  | 75  |    |
| Lys | Cys | His | Pro | Gly | Tyr | Ala | Gly | Lys | Thr | Cys | Asn | Gln | Asp | Leu | 80  | 85  | 90  |    |
| Asn | Glu | Cys | Gly | Leu | Lys | Pro | Arg | Pro | Cys | Lys | His | Arg | Cys | Met | 95  | 100 | 105 |    |
| Asn | Thr | Tyr | Gly | Ser | Tyr | Lys | Cys | Tyr | Cys | Leu | Asn | Gly | Tyr | Met | 110 | 115 | 120 |    |
| Leu | Met | Pro | Asp | Gly | Ser | Cys | Ser | Ser | Ala | Leu | Thr | Cys | Ser | Met | 125 | 130 | 135 |    |
| Ala | Asn | Cys | Gln | Tyr | Gly | Cys | Asp | Val | Val | Lys | Gly | Gln | Ile | Arg | 140 | 145 | 150 |    |
| Cys | Gln | Cys | Pro | Ser | Pro | Gly | Leu | His | Leu | Ala | Pro | Asp | Gly | Arg | 155 | 160 | 165 |    |

|                 |                     |                         |
|-----------------|---------------------|-------------------------|
| Thr Cys Val Asp | Val Asp Glu Cys Ala | Thr Gly Arg Ala Ser Cys |
| 170             | 175                 | 180                     |
| Pro Arg Phe Arg | Gln Cys Val Asn Thr | Phe Gly Ser Tyr Ile Cys |
| 185             | 190                 | 195                     |
| Lys Cys His Lys | Gly Phe Asp Leu Met | Tyr Ile Gly Gly Lys Tyr |
| 200             | 205                 | 210                     |
| Gln Cys His Asp | Ile Asp Glu Cys Ser | Leu Gly Gln Tyr Gln Cys |
| 215             | 220                 | 225                     |
| Ser Ser Phe Ala | Arg Cys Tyr Asn Val | Arg Gly Ser Tyr Lys Cys |
| 230             | 235                 | 240                     |
| Lys Cys Lys Glu | Gly Tyr Gln Gly Asp | Gly Leu Thr Cys Val Tyr |
| 245             | 250                 | 255                     |
| Ile Pro Lys Val | Met Ile Glu Pro Ser | Gly Pro Ile His Val Pro |
| 260             | 265                 | 270                     |
| Lys Gly Asn Gly | Thr Ile Leu Lys Gly | Asp Thr Gly Asn Asn Asn |
| 275             | 280                 | 285                     |
| Trp Ile Pro Asp | Val Gly Ser Thr Trp | Trp Pro Pro Lys Thr Pro |
| 290             | 295                 | 300                     |
| Tyr Ile Pro Pro | Ile Ile Thr Asn Arg | Pro Thr Ser Lys Pro Thr |
| 305             | 310                 | 315                     |
| Thr Arg Pro Thr | Pro Lys Pro Thr Pro | Ile Pro Thr Pro Pro Pro |
| 320             | 325                 | 330                     |
| Pro Pro Pro Leu | Pro Thr Glu Leu Arg | Thr Pro Leu Pro Pro Thr |
| 335             | 340                 | 345                     |
| Thr Pro Glu Arg | Pro Thr Thr Gly Leu | Thr Thr Ile Ala Pro Ala |
| 350             | 355                 | 360                     |
| Ala Ser Thr Pro | Pro Gly Gly Ile Thr | Val Asp Asn Arg Val Gln |
| 365             | 370                 | 375                     |
| Thr Asp Pro Gln | Lys Pro Arg Gly Asp | Val Phe Ser Val Leu Val |
| 380             | 385                 | 390                     |
| His Ser Cys Asn | Phe Asp His Gly Leu | Cys Gly Trp Ile Arg Glu |
| 395             | 400                 | 405                     |
| Lys Asp Asn Asp | Leu His Trp Glu Pro | Ile Arg Asp Pro Ala Gly |
| 410             | 415                 | 420                     |
| Gly Gln Tyr Leu | Thr Val Ser Ala Ala | Lys Ala Pro Gly Gly Lys |

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|   |     |  |     |  |     |
|---|-----|--|-----|--|-----|
|   | 425 |  | 430 |  | 435 |
| Ala Ala Arg Leu Val Leu Pro Leu Gly Arg Leu Met His Ser Gly |     |  |     |  |     |
|   | 440 |  | 445 |  | 450 |
| Asp Leu Cys Leu Ser Phe Arg His Lys Val Thr Gly Leu His Ser |     |  |     |  |     |
|   | 455 |  | 460 |  | 465 |
| Gly Thr Leu Gln Val Phe Val Arg Lys His Gly Ala His Gly Ala |     |  |     |  |     |
|   | 470 |  | 475 |  | 480 |
| Ala Leu Trp Gly Arg Asn Gly Gly His Gly Trp Arg Gln Thr Gln |     |  |     |  |     |
|   | 485 |  | 490 |  | 495 |
| Ile Thr Leu Arg Gly Ala Asp Ile Lys Ser Glu Ser Gln Arg     |     |  |     |  |     |
|   | 500 |  | 505 |  |     |

&lt;210&gt; 316

&lt;211&gt; 24

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic Oligonucleotide Probe

&lt;400&gt; 316

gatggttcct gctcaagtgc cctg 24

&lt;210&gt; 317

&lt;211&gt; 24

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic Oligonucleotide Probe

&lt;400&gt; 317

ttgcacttgt aggaccacg tacg 24

&lt;210&gt; 318

&lt;211&gt; 50

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic Oligonucleotide Probe

&lt;400&gt; 318

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&lt;210&gt; 319

&lt;211&gt; 2110

&lt;212&gt; DNA

FBI LABORATORY

<213> Homo Sapien

<400> 319

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 caacaggtgc ttgctcgggg ctgaaggtga cagtgccatc acacactgtc 150  
 catggcgta gaggtcaggc cctctaccta cccgtccact atggcttcca 200  
 cactccagca tcagacatcc agatcatatg gctatttgag agaccccaca 250  
 caatgcccac atacttactg ggctctgtga ataagtctgt ggttcctgac 300  
 ttggaatacc aacacaagtt caccatgatg ccaccaatg catctctgct 350  
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 acattcaggg aaatggaact ctatctgcca gtcagaagat acaagtcacg 450  
 gttgatgatc ctgtcacaaa gccagtggtg cagattcacc ctccctctgg 500  
 ggctgtggag tatgtgggga acatgacct gacatgccat gtggaagggg 550  
 gcactcggct agcttaccaa tggctaaaaa atgggagacc tgtccacacc 600  
 agtccacct actccttttc tccccaaaac aatacccttc atattgctcc 650  
 agtaaccaag gaagacattg ggaattacag ctgcctgggtg aggaacctg 700  
 tcagtgaat ggaaagtgat atcattatgc ccatcatata ttatggacct 750  
 tatggacttc aagtgaattc tgataaaggg ctaaaagtag ggggaagtgtt 800  
 tactgttgac cttggagagg ccatcctatt tgattgttct gctgattctc 850  
 atccccccaa cacctactcc tggattagga ggactgacaa tactacatat 900  
 atcattaagc atgggcctcg cttagaagtt gcatctgaga aagtagccca 950  
 gaagacaatg gactatgtgt gctgtgctta caacaacata accggcaggg 1000  
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 aaaaaactat gccttctctt ttttttcaat caccagtagt atttttgaga 2000  
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 aaaaaaaaaa 2110

<210> 320

<211> 450

<212> PRT

<213> Homo Sapien

<400> 320

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Trp | Leu | Lys | Val | Phe | Thr | Thr | Phe | Leu | Ser | Phe | Ala | Thr | Gly |
| 1   |     |     |     | 5   |     |     |     | 10  |     |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Ala | Cys | Ser | Gly | Leu | Lys | Val | Thr | Val | Pro | Ser | His | Thr | Val | His |
|     |     |     |     | 20  |     |     |     |     | 25  |     |     |     | 30  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Gly | Val | Arg | Gly | Gln | Ala | Leu | Tyr | Leu | Pro | Val | His | Tyr | Gly | Phe |
|     |     |     |     | 35  |     |     |     | 40  |     |     |     |     | 45  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Thr | Pro | Ala | Ser | Asp | Ile | Gln | Ile | Ile | Trp | Leu | Phe | Glu | Arg |
|     |     |     |     | 50  |     |     |     | 55  |     |     |     |     | 60  |     |





<220>

<223> Synthetic Oligonucleotide Probe

<400> 323

ctccctctgg gctgtggagt atgtggggaa catgaccctg acatg 45

<210> 324

<211> 2397

<212> DNA

<213> Homo Sapien

<400> 324

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 acgttcgcgt catcacggac gagaactgga gagaactgct ggaaggagac 150  
 tggatgatag aattttatgc cccgtggtgc cctgcttgct aaaatcttca 200  
 accggaatgg gaaagttttg ctgaatgggg agaagatctt gaggttaata 250  
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 caaaatttcc ttgtattttt aggttatgca actaataaaa actaccttac 1400  
 attaattaat tacagttttc tacacatggg aatacaggat atgctactga 1450  
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 ttcttttaaag ccctctcctt tagaatttaa aatattgtac cattaaagag 2300  
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<210> 325

<211> 280

<212> PRT

<213> Homo Sapien

<400> 325

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
| Met | Ala | Pro | Ser | Gly | Ser | Leu | Ala | Val | Pro | Leu | Ala | Val | Leu | Val | 1   | 5   | 10  | 15 |
| Leu | Leu | Leu | Trp | Gly | Ala | Pro | Trp | Thr | His | Gly | Arg | Arg | Ser | Asn | 20  | 25  | 30  |    |
| Val | Arg | Val | Ile | Thr | Asp | Glu | Asn | Trp | Arg | Glu | Leu | Leu | Glu | Gly | 35  | 40  | 45  |    |
| Asp | Trp | Met | Ile | Glu | Phe | Tyr | Ala | Pro | Trp | Cys | Pro | Ala | Cys | Gln | 50  | 55  | 60  |    |
| Asn | Leu | Gln | Pro | Glu | Trp | Glu | Ser | Phe | Ala | Glu | Trp | Gly | Glu | Asp | 65  | 70  | 75  |    |
| Leu | Glu | Val | Asn | Ile | Ala | Lys | Val | Asp | Val | Thr | Glu | Gln | Pro | Gly | 80  | 85  | 90  |    |
| Leu | Ser | Gly | Arg | Phe | Ile | Ile | Thr | Ala | Leu | Pro | Thr | Ile | Tyr | His | 95  | 100 | 105 |    |
| Cys | Lys | Asp | Gly | Glu | Phe | Arg | Arg | Tyr | Gln | Gly | Pro | Arg | Thr | Lys | 110 | 115 | 120 |    |
| Lys | Asp | Phe | Ile | Asn | Phe | Ile | Ser | Asp | Lys | Glu | Trp | Lys | Ser | Ile | 125 | 130 | 135 |    |
| Glu | Pro | Val | Ser | Ser | Trp | Phe | Gly | Pro | Gly | Ser | Val | Leu | Met | Ser | 140 | 145 | 150 |    |
| Ser | Met | Ser | Ala | Leu | Phe | Gln | Leu | Ser | Met | Trp | Ile | Arg | Thr | Cys | 155 | 160 | 165 |    |
| His | Asn | Tyr | Phe | Ile | Glu | Asp | Leu | Gly | Leu | Pro | Val | Trp | Gly | Ser | 170 | 175 | 180 |    |
| Tyr | Thr | Val | Phe | Ala | Leu | Ala | Thr | Leu | Phe | Ser | Gly | Leu | Leu | Leu | 185 | 190 | 195 |    |
| Gly | Leu | Cys | Met | Ile | Phe | Val | Ala | Asp | Cys | Leu | Cys | Pro | Ser | Lys | 200 | 205 | 210 |    |
| Arg | Arg | Arg | Pro | Gln | Pro | Tyr | Pro | Tyr | Pro | Ser | Lys | Lys | Leu | Leu |     |     |     |    |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|     | 215 |     | 220 |     | 225 |     |     |     |     |     |     |     |     |     |
| Ser | Glu | Ser | Ala | Gln | Pro | Leu | Lys | Lys | Val | Glu | Glu | Glu | Gln | Glu |
|     |     |     |     | 230 |     |     |     |     | 235 |     |     |     |     | 240 |
| Ala | Asp | Glu | Glu | Asp | Val | Ser | Glu | Glu | Glu | Ala | Glu | Ser | Lys | Glu |
|     |     |     |     | 245 |     |     |     |     | 250 |     |     |     |     | 255 |
| Gly | Thr | Asn | Lys | Asp | Phe | Pro | Gln | Asn | Ala | Ile | Arg | Gln | Arg | Ser |
|     |     |     |     | 260 |     |     |     |     | 265 |     |     |     |     | 270 |
| Leu | Gly | Pro | Ser | Leu | Ala | Thr | Asp | Lys | Ser |     |     |     |     |     |
|     |     |     |     | 275 |     |     |     |     | 280 |     |     |     |     |     |

&lt;210&gt; 326

&lt;211&gt; 23

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic Oligonucleotide Probe

&lt;400&gt; 326

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&lt;210&gt; 327

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic Oligonucleotide Probe

&lt;400&gt; 327

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&lt;210&gt; 328

&lt;211&gt; 21

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic Oligonucleotide Probe

&lt;400&gt; 328

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&lt;210&gt; 329

&lt;211&gt; 25

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

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<223> Synthetic Oligonucleotide Probe

<400> 329

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<210> 330

<211> 45

<212> DNA

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<220>

<223> Synthetic Oligonucleotide Probe

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<210> 331

<211> 2168

<212> DNA

<213> Homo Sapien

<400> 331

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<210> 332

<211> 533

<212> PRT

<213> Homo Sapien

<400> 332

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |    |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
| Met | Lys | Leu | Trp | Val | Ser | Ala | Leu | Leu | Met | Ala | Trp | Phe | Gly | Val | 1   | 5   | 10  | 15 |
| Leu | Ser | Cys | Val | Gln | Ala | Glu | Phe | Phe | Thr | Ser | Ile | Gly | His | Met | 20  | 25  | 30  |    |
| Thr | Asp | Leu | Ile | Tyr | Ala | Glu | Lys | Glu | Leu | Val | Gln | Ser | Leu | Lys | 35  | 40  | 45  |    |
| Glu | Tyr | Ile | Leu | Val | Glu | Glu | Ala | Lys | Leu | Ser | Lys | Ile | Lys | Ser | 50  | 55  | 60  |    |
| Trp | Ala | Asn | Lys | Met | Glu | Ala | Leu | Thr | Ser | Lys | Ser | Ala | Ala | Asp | 65  | 70  | 75  |    |
| Ala | Glu | Gly | Tyr | Leu | Ala | His | Pro | Val | Asn | Ala | Tyr | Lys | Leu | Val | 80  | 85  | 90  |    |
| Lys | Arg | Leu | Asn | Thr | Asp | Trp | Pro | Ala | Leu | Glu | Asp | Leu | Val | Leu | 95  | 100 | 105 |    |
| Gln | Asp | Ser | Ala | Ala | Gly | Phe | Ile | Ala | Asn | Leu | Ser | Val | Gln | Arg | 110 | 115 | 120 |    |
| Gln | Phe | Phe | Pro | Thr | Asp | Glu | Asp | Glu | Ile | Gly | Ala | Ala | Lys | Ala | 125 | 130 | 135 |    |
| Leu | Met | Arg | Leu | Gln | Asp | Thr | Tyr | Arg | Leu | Asp | Pro | Gly | Thr | Ile | 140 | 145 | 150 |    |
| Ser | Arg | Gly | Glu | Leu | Pro | Gly | Thr | Lys | Tyr | Gln | Ala | Met | Leu | Ser | 155 | 160 | 165 |    |
| Val | Asp | Asp | Cys | Phe | Gly | Met | Gly | Arg | Ser | Ala | Tyr | Asn | Glu | Gly | 170 | 175 | 180 |    |
| Asp | Tyr | Tyr | His | Thr | Val | Leu | Trp | Met | Glu | Gln | Val | Leu | Lys | Gln | 185 | 190 | 195 |    |
| Leu | Asp | Ala | Gly | Glu | Glu | Ala | Thr | Thr | Thr | Lys | Ser | Gln | Val | Leu | 200 | 205 | 210 |    |

|   |   |     |     |     |
|---|---|-----|-----|-----|
| Asp Tyr Leu Ser   | Tyr Ala Val Phe Gln Leu Gly Asp Leu His Arg | 215 | 220 | 225 |
| Ala Leu Glu Leu Thr Arg Arg Leu Leu Ser Leu Asp Pro Ser His |   | 230 | 235 | 240 |
| Glu Arg Ala Gly Gly Asn Leu Arg Tyr Phe Glu Gln Leu Leu Glu |   | 245 | 250 | 255 |
| Glu Glu Arg Glu Lys Thr Leu Thr Asn Gln Thr Glu Ala Glu Leu |   | 260 | 265 | 270 |
| Ala Thr Pro Glu Gly Ile Tyr Glu Arg Pro Val Asp Tyr Leu Pro |   | 275 | 280 | 285 |
| Glu Arg Asp Val Tyr Glu Ser Leu Cys Arg Gly Glu Gly Val Lys |   | 290 | 295 | 300 |
| Leu Thr Pro Arg Arg Gln Lys Arg Leu Phe Cys Arg Tyr His His |   | 305 | 310 | 315 |
| Gly Asn Arg Ala Pro Gln Leu Leu Ile Ala Pro Phe Lys Glu Glu |   | 320 | 325 | 330 |
| Asp Glu Trp Asp Ser Pro His Ile Val Arg Tyr Tyr Asp Val Met |   | 335 | 340 | 345 |
| Ser Asp Glu Glu Ile Glu Arg Ile Lys Glu Ile Ala Lys Pro Lys |   | 350 | 355 | 360 |
| Leu Ala Arg Ala Thr Val Arg Asp Pro Lys Thr Gly Val Leu Thr |   | 365 | 370 | 375 |
| Val Ala Ser Tyr Arg Val Ser Lys Ser Ser Trp Leu Glu Glu Asp |   | 380 | 385 | 390 |
| Asp Asp Pro Val Val Ala Arg Val Asn Arg Arg Met Gln His Ile |   | 395 | 400 | 405 |
| Thr Gly Leu Thr Val Lys Thr Ala Glu Leu Leu Gln Val Ala Asn |   | 410 | 415 | 420 |
| Tyr Gly Val Gly Gly Gln Tyr Glu Pro His Phe Asp Phe Ser Arg |   | 425 | 430 | 435 |
| Arg Pro Phe Asp Ser Gly Leu Lys Thr Glu Gly Asn Arg Leu Ala |   | 440 | 445 | 450 |
| Thr Phe Leu Asn Tyr Met Ser Asp Val Glu Ala Gly Gly Ala Thr |   | 455 | 460 | 465 |
| Val Phe Pro Asp Leu Gly Ala Ala Ile Trp Pro Lys Lys Gly Thr |   | 470 | 475 | 480 |

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Ala Val Phe Trp Tyr Asn Leu Leu Arg Ser Gly Glu Gly Asp Tyr  
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Arg Thr Arg His Ala Ala Cys Pro Val Leu Val Gly Cys Lys Trp  
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<210> 333

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 333

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<210> 334

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 334

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<210> 335

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 335

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<212> DNA

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<223> Synthetic Oligonucleotide Probe

0390550501



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<210> 338  
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<212> DNA  
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<210> 339

<211> 772

<212> PRT

<213> Homo Sapien

<400> 339

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Met | Arg | Leu | Ser | Ser | Leu | Leu | Ala | Leu | Leu | Arg | Pro | Ala | Leu | Pro |
| 1   |     |     |     | 5   |     |     |     |     | 10  |     |     |     | 15  |     |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Ile | Leu | Gly | Leu | Ser | Leu | Gly | Cys | Ser | Leu | Ser | Leu | Leu | Arg |
|     |     |     |     | 20  |     |     |     |     | 25  |     |     |     |     | 30  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Ser | Trp | Ile | Gln | Gly | Glu | Gly | Glu | Asp | Pro | Cys | Val | Glu | Ala |
|     |     |     |     | 35  |     |     |     |     | 40  |     |     |     |     | 45  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Val | Gly | Glu | Arg | Gly | Gly | Pro | Gln | Asn | Pro | Asp | Ser | Arg | Ala | Arg |
|     |     |     |     | 50  |     |     |     |     | 55  |     |     |     |     | 60  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Leu | Asp | Gln | Ser | Asp | Glu | Asp | Phe | Lys | Pro | Arg | Ile | Val | Pro | Tyr |
|     |     |     |     | 65  |     |     |     |     | 70  |     |     |     |     | 75  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Tyr | Arg | Asp | Pro | Asn | Lys | Pro | Tyr | Lys | Lys | Val | Leu | Arg | Thr | Arg |
|     |     |     |     | 80  |     |     |     |     | 85  |     |     |     |     | 90  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Tyr | Ile | Gln | Thr | Glu | Leu | Gly | Ser | Arg | Glu | Arg | Leu | Leu | Val | Ala |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |  |  |  |     |  |  |  |  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|--|--|--|-----|--|--|--|--|
| 95  |     |     |     |     |     |     |     |     |     |     |     |     |     |     | 100 |  |  |  |  | 105 |  |  |  |  |
| Val | Leu | Thr | Ser | Arg | Ala | Thr | Leu | Ser | Thr | Leu | Ala | Val | Ala | Val |     |  |  |  |  |     |  |  |  |  |
|     |     |     |     | 110 |     |     |     |     | 115 |     |     |     |     | 120 |     |  |  |  |  |     |  |  |  |  |
| Asn | Arg | Thr | Val | Ala | His | His | Phe | Pro | Arg | Leu | Leu | Tyr | Phe | Thr |     |  |  |  |  |     |  |  |  |  |
|     |     |     |     | 125 |     |     |     |     | 130 |     |     |     |     | 135 |     |  |  |  |  |     |  |  |  |  |
| Gly | Gln | Arg | Gly | Ala | Arg | Ala | Pro | Ala | Gly | Met | Gln | Val | Val | Ser |     |  |  |  |  |     |  |  |  |  |
|     |     |     |     | 140 |     |     |     |     | 145 |     |     |     |     | 150 |     |  |  |  |  |     |  |  |  |  |
| His | Gly | Asp | Glu | Arg | Pro | Ala | Trp | Leu | Met | Ser | Glu | Thr | Leu | Arg |     |  |  |  |  |     |  |  |  |  |
|     |     |     |     | 155 |     |     |     |     | 160 |     |     |     |     | 165 |     |  |  |  |  |     |  |  |  |  |
| His | Leu | His | Thr | His | Phe | Gly | Ala | Asp | Tyr | Asp | Trp | Phe | Phe | Ile |     |  |  |  |  |     |  |  |  |  |
|     |     |     |     | 170 |     |     |     |     | 175 |     |     |     |     | 180 |     |  |  |  |  |     |  |  |  |  |
| Met | Gln | Asp | Asp | Thr | Tyr | Val | Gln | Ala | Pro | Arg | Leu | Ala | Ala | Leu |     |  |  |  |  |     |  |  |  |  |
|     |     |     |     | 185 |     |     |     |     | 190 |     |     |     |     | 195 |     |  |  |  |  |     |  |  |  |  |
| Ala | Gly | His | Leu | Ser | Ile | Asn | Gln | Asp | Leu | Tyr | Leu | Gly | Arg | Ala |     |  |  |  |  |     |  |  |  |  |
|     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |     | 210 |     |  |  |  |  |     |  |  |  |  |
| Glu | Glu | Phe | Ile | Gly | Ala | Gly | Glu | Gln | Ala | Arg | Tyr | Cys | His | Gly |     |  |  |  |  |     |  |  |  |  |
|     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     | 225 |     |  |  |  |  |     |  |  |  |  |
| Gly | Phe | Gly | Tyr | Leu | Leu | Ser | Arg | Ser | Leu | Leu | Leu | Arg | Leu | Arg |     |  |  |  |  |     |  |  |  |  |
|     |     |     |     | 230 |     |     |     |     | 235 |     |     |     |     | 240 |     |  |  |  |  |     |  |  |  |  |
| Pro | His | Leu | Asp | Gly | Cys | Arg | Gly | Asp | Ile | Leu | Ser | Ala | Arg | Pro |     |  |  |  |  |     |  |  |  |  |
|     |     |     |     | 245 |     |     |     |     | 250 |     |     |     |     | 255 |     |  |  |  |  |     |  |  |  |  |
| Asp | Glu | Trp | Leu | Gly | Arg | Cys | Leu | Ile | Asp | Ser | Leu | Gly | Val | Gly |     |  |  |  |  |     |  |  |  |  |
|     |     |     |     | 260 |     |     |     |     | 265 |     |     |     |     | 270 |     |  |  |  |  |     |  |  |  |  |
| Cys | Val | Ser | Gln | His | Gln | Gly | Gln | Gln | Tyr | Arg | Ser | Phe | Glu | Leu |     |  |  |  |  |     |  |  |  |  |
|     |     |     |     | 275 |     |     |     |     | 280 |     |     |     |     | 285 |     |  |  |  |  |     |  |  |  |  |
| Ala | Lys | Asn | Arg | Asp | Pro | Glu | Lys | Glu | Gly | Ser | Ser | Ala | Phe | Leu |     |  |  |  |  |     |  |  |  |  |
|     |     |     |     | 290 |     |     |     |     | 295 |     |     |     |     | 300 |     |  |  |  |  |     |  |  |  |  |
| Ser | Ala | Phe | Ala | Val | His | Pro | Val | Ser | Glu | Gly | Thr | Leu | Met | Tyr |     |  |  |  |  |     |  |  |  |  |
|     |     |     |     | 305 |     |     |     |     | 310 |     |     |     |     | 315 |     |  |  |  |  |     |  |  |  |  |
| Arg | Leu | His | Lys | Arg | Phe | Ser | Ala | Leu | Glu | Leu | Glu | Arg | Ala | Tyr |     |  |  |  |  |     |  |  |  |  |
|     |     |     |     | 320 |     |     |     |     | 325 |     |     |     |     | 330 |     |  |  |  |  |     |  |  |  |  |
| Ser | Glu | Ile | Glu | Gln | Leu | Gln | Ala | Gln | Ile | Arg | Asn | Leu | Thr | Val |     |  |  |  |  |     |  |  |  |  |
|     |     |     |     | 335 |     |     |     |     | 340 |     |     |     |     | 345 |     |  |  |  |  |     |  |  |  |  |
| Leu | Thr | Pro | Glu | Gly | Glu | Ala | Gly | Leu | Ser | Trp | Pro | Val | Gly | Leu |     |  |  |  |  |     |  |  |  |  |
|     |     |     |     | 350 |     |     |     |     | 355 |     |     |     |     | 360 |     |  |  |  |  |     |  |  |  |  |

|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |  |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--|
| Pro | Ala | Pro | Phe | Thr | Pro | His | Ser | Arg | Phe | Glu | Val | Leu | Gly | Trp |  |
|     |     |     |     | 365 |     |     |     |     |     | 370 |     |     |     | 375 |  |
| Asp | Tyr | Phe | Thr | Glu | Gln | His | Thr | Phe | Ser | Cys | Ala | Asp | Gly | Ala |  |
|     |     |     |     | 380 |     |     |     |     |     | 385 |     |     |     | 390 |  |
| Pro | Lys | Cys | Pro | Leu | Gln | Gly | Ala | Ser | Arg | Ala | Asp | Val | Gly | Asp |  |
|     |     |     |     | 395 |     |     |     |     |     | 400 |     |     |     | 405 |  |
| Ala | Leu | Glu | Thr | Ala | Leu | Glu | Gln | Leu | Asn | Arg | Arg | Tyr | Gln | Pro |  |
|     |     |     |     | 410 |     |     |     |     |     | 415 |     |     |     | 420 |  |
| Arg | Leu | Arg | Phe | Gln | Lys | Gln | Arg | Leu | Leu | Asn | Gly | Tyr | Arg | Arg |  |
|     |     |     |     | 425 |     |     |     |     |     | 430 |     |     |     | 435 |  |
| Phe | Asp | Pro | Ala | Arg | Gly | Met | Glu | Tyr | Thr | Leu | Asp | Leu | Leu | Leu |  |
|     |     |     |     | 440 |     |     |     |     |     | 445 |     |     |     | 450 |  |
| Glu | Cys | Val | Thr | Gln | Arg | Gly | His | Arg | Arg | Ala | Leu | Ala | Arg | Arg |  |
|     |     |     |     | 455 |     |     |     |     |     | 460 |     |     |     | 465 |  |
| Val | Ser | Leu | Leu | Arg | Pro | Leu | Ser | Arg | Val | Glu | Ile | Leu | Pro | Met |  |
|     |     |     |     | 470 |     |     |     |     |     | 475 |     |     |     | 480 |  |
| Pro | Tyr | Val | Thr | Glu | Ala | Thr | Arg | Val | Gln | Leu | Val | Leu | Pro | Leu |  |
|     |     |     |     | 485 |     |     |     |     |     | 490 |     |     |     | 495 |  |
| Leu | Val | Ala | Glu | Ala | Ala | Ala | Ala | Pro | Ala | Phe | Leu | Glu | Ala | Phe |  |
|     |     |     |     | 500 |     |     |     |     |     | 505 |     |     |     | 510 |  |
| Ala | Ala | Asn | Val | Leu | Glu | Pro | Arg | Glu | His | Ala | Leu | Leu | Thr | Leu |  |
|     |     |     |     | 515 |     |     |     |     |     | 520 |     |     |     | 525 |  |
| Leu | Leu | Val | Tyr | Gly | Pro | Arg | Glu | Gly | Gly | Arg | Gly | Ala | Pro | Asp |  |
|     |     |     |     | 530 |     |     |     |     |     | 535 |     |     |     | 540 |  |
| Pro | Phe | Leu | Gly | Val | Lys | Ala | Ala | Ala | Ala | Glu | Leu | Glu | Arg | Arg |  |
|     |     |     |     | 545 |     |     |     |     |     | 550 |     |     |     | 555 |  |
| Tyr | Pro | Gly | Thr | Arg | Leu | Ala | Trp | Leu | Ala | Val | Arg | Ala | Glu | Ala |  |
|     |     |     |     | 560 |     |     |     |     |     | 565 |     |     |     | 570 |  |
| Pro | Ser | Gln | Val | Arg | Leu | Met | Asp | Val | Val | Ser | Lys | Lys | His | Pro |  |
|     |     |     |     | 575 |     |     |     |     |     | 580 |     |     |     | 585 |  |
| Val | Asp | Thr | Leu | Phe | Phe | Leu | Thr | Thr | Val | Trp | Thr | Arg | Pro | Gly |  |
|     |     |     |     | 590 |     |     |     |     |     | 595 |     |     |     | 600 |  |
| Pro | Glu | Val | Leu | Asn | Arg | Cys | Arg | Met | Asn | Ala | Ile | Ser | Gly | Trp |  |
|     |     |     |     | 605 |     |     |     |     |     | 610 |     |     |     | 615 |  |
| Gln | Ala | Phe | Phe | Pro | Val | His | Phe | Gln | Glu | Phe | Asn | Pro | Ala | Leu |  |
|     |     |     |     | 620 |     |     |     |     |     | 625 |     |     |     | 630 |  |

Ser Pro Gln Arg Ser Pro Pro Gly Pro Pro Gly Ala Gly Pro Asp  
 635 640 645  
 Pro Pro Ser Pro Pro Gly Ala Asp Pro Ser Arg Gly Ala Pro Ile  
 650 655 660  
 Gly Gly Arg Phe Asp Arg Gln Ala Ser Ala Glu Gly Cys Phe Tyr  
 665 670 675  
 Asn Ala Asp Tyr Leu Ala Ala Arg Ala Arg Leu Ala Gly Glu Leu  
 680 685 690  
 Ala Gly Gln Glu Glu Glu Glu Ala Leu Glu Gly Leu Glu Val Met  
 695 700 705  
 Asp Val Phe Leu Arg Phe Ser Gly Leu His Leu Phe Arg Ala Val  
 710 715 720  
 Glu Pro Gly Leu Val Gln Lys Phe Ser Leu Arg Asp Cys Ser Pro  
 725 730 735  
 Arg Leu Ser Glu Glu Leu Tyr His Arg Cys Arg Leu Ser Asn Leu  
 740 745 750  
 Glu Gly Leu Gly Gly Arg Ala Gln Leu Ala Met Ala Leu Phe Glu  
 755 760 765  
 Gln Glu Gln Ala Asn Ser Thr  
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<212> DNA

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<400> 340

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 ctttttgaag ggtgtgatgc ttggaagcat tttctgtgct ttgatcacta 150  
 tgctaggaca cattaggatt ggtcatggaa atagaatgca ccaccatgag 200  
 catcatcacc tacaagctcc taacaaagaa gatatcttga aaatttcaga 250  
 ggatgagcgc atggagctca gtaagagctt tcgagtatac tgtattatcc 300  
 ttgtaaaacc caaagatgtg agtctttggg ctgcagtaaa ggagacttgg 350  
 accaaacact gtgacaaagc agagttcttc agttctgaaa atgttaaagt 400

gtttgagtca attaatatgg acacaaatga catgtggtta atgatgagaa 450  
 aagcttacaa atacgccttt gataagtata gagaccaata caactgggtc 500  
 ttccttgacac gcccactac gtttgctatc attgaaaacc taaagtat 550  
 tttgttaaaa aaggatccat cacagccttt ctatctaggc cacactataa 600  
 aatctggaga ccttgaatat gtgggtatgg aaggaggaat tgtcttaagt 650  
 gtagaatcaa tgaaaagact taacagcctt ctcaatatcc cagaaaagt 700  
 tcctgaacag ggagggatga tttggaagat atctgaagat aaacagctag 750  
 cagtttgcct gaaatatgct ggagtatttg cagaaaatgc agaagatgct 800  
 gatggaaaag atgtatttaa taccaaatct gttgggcctt ctattaaaga 850  
 ggcaatgact tatcacccca accaggtagt agaaggctgt tggtcagata 900  
 tggctgttac ttttaatgga ctgactccaa atcagatgca tgtgatgatg 950  
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 ggttttctta cctccaaatg gttctgacaa tgactgagaa gtggtagaaa 1050  
 agcgtgaata tgatctttgt ataggacgtg tgttgctcatt atttgtagta 1100  
 gtaactacat atccaatata gctgtatggt tctttttctt ttctaatttg 1150  
 gtggcactgg tataaccaca cattaaagtc agtagtacat ttttaaata 1200  
 ggggtggtttt tttctttaaa acacatgaac attgtaaata tggttgaaa 1250  
 aagtgtttta agaataataa ttttgcaaata aaactattaa taaatattat 1300  
 atgtgataaa ttctaaatta tgaacattag aaatctgtgg ggcacatatt 1350  
 tttgctgatt ggttaaaaaa ttttaacagg tcttttagcgt tctaagatat 1400  
 gcaaatagata tctctagttg tgaatttggt attaaagtaa aacttttagc 1450  
 tgtgtgttcc ctttacttct aatactgatt tatgttctaa gcctcccaa 1500  
 gttccaatgg atttgccttc tcaaaatgta caactaagca actaaagaaa 1550  
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<210> 341

<211> 318

<212> PRT

<213> Homo Sapien

&lt;400&gt; 341

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|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|----|
| Met | Leu | Ser | Glu | Ser | Ser | Ser | Phe | Leu | Lys | Gly | Val | Met | Leu | Gly | 1   | 5   | 10  | 15 |
| Ser | Ile | Phe | Cys | Ala | Leu | Ile | Thr | Met | Leu | Gly | His | Ile | Arg | Ile | 20  | 25  | 30  |    |
| Gly | His | Gly | Asn | Arg | Met | His | His | His | Glu | His | His | His | Leu | Gln | 35  | 40  | 45  |    |
| Ala | Pro | Asn | Lys | Glu | Asp | Ile | Leu | Lys | Ile | Ser | Glu | Asp | Glu | Arg | 50  | 55  | 60  |    |
| Met | Glu | Leu | Ser | Lys | Ser | Phe | Arg | Val | Tyr | Cys | Ile | Ile | Leu | Val | 65  | 70  | 75  |    |
| Lys | Pro | Lys | Asp | Val | Ser | Leu | Trp | Ala | Ala | Val | Lys | Glu | Thr | Trp | 80  | 85  | 90  |    |
| Thr | Lys | His | Cys | Asp | Lys | Ala | Glu | Phe | Phe | Ser | Ser | Glu | Asn | Val | 95  | 100 | 105 |    |
| Lys | Val | Phe | Glu | Ser | Ile | Asn | Met | Asp | Thr | Asn | Asp | Met | Trp | Leu | 110 | 115 | 120 |    |
| Met | Met | Arg | Lys | Ala | Tyr | Lys | Tyr | Ala | Phe | Asp | Lys | Tyr | Arg | Asp | 125 | 130 | 135 |    |
| Gln | Tyr | Asn | Trp | Phe | Phe | Leu | Ala | Arg | Pro | Thr | Thr | Phe | Ala | Ile | 140 | 145 | 150 |    |
| Ile | Glu | Asn | Leu | Lys | Tyr | Phe | Leu | Leu | Lys | Lys | Asp | Pro | Ser | Gln | 155 | 160 | 165 |    |
| Pro | Phe | Tyr | Leu | Gly | His | Thr | Ile | Lys | Ser | Gly | Asp | Leu | Glu | Tyr | 170 | 175 | 180 |    |
| Val | Gly | Met | Glu | Gly | Gly | Ile | Val | Leu | Ser | Val | Glu | Ser | Met | Lys | 185 | 190 | 195 |    |
| Arg | Leu | Asn | Ser | Leu | Leu | Asn | Ile | Pro | Glu | Lys | Cys | Pro | Glu | Gln | 200 | 205 | 210 |    |
| Gly | Gly | Met | Ile | Trp | Lys | Ile | Ser | Glu | Asp | Lys | Gln | Leu | Ala | Val | 215 | 220 | 225 |    |
| Cys | Leu | Lys | Tyr | Ala | Gly | Val | Phe | Ala | Glu | Asn | Ala | Glu | Asp | Ala | 230 | 235 | 240 |    |
| Asp | Gly | Lys | Asp | Val | Phe | Asn | Thr | Lys | Ser | Val | Gly | Leu | Ser | Ile | 245 | 250 | 255 |    |
| Lys | Glu | Ala | Met | Thr | Tyr | His | Pro | Asn | Gln | Val | Val | Glu | Gly | Cys |     |     |     |    |

09905056 07204



|                 |                         |                     |     |  |     |
|-----------------|-------------------------|---------------------|-----|--|-----|
|                 | 260                     |                     | 265 |  | 270 |
| Cys Ser Asp Met | Ala Val Thr Phe Asn Gly | Leu Thr Pro Asn Gln |     |  |     |
|                 | 275                     |                     | 280 |  | 285 |
| Met His Val Met | Met Tyr Gly Val Tyr Arg | Leu Arg Ala Phe Gly |     |  |     |
|                 | 290                     |                     | 295 |  | 300 |
| His Ile Phe Asn | Asp Ala Leu Val Phe Leu | Pro Pro Asn Gly Ser |     |  |     |
|                 | 305                     |                     | 310 |  | 315 |

Asp Asn Asp

<210> 342

<211> 23

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<220>

<223> Synthetic Oligonucleotide Probe

<400> 342

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<210> 343

<211> 18

<212> DNA

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<220>

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<400> 343

ctggttcttc cttgcacg 18

<210> 344

<211> 28

<212> DNA

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<223> Synthetic Oligonucleotide Probe

<400> 344

gccc aaatgc cctaaggcgg tatacccc 28

<210> 345

<211> 50

<212> DNA

<213> Artificial Sequence

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FOR 20" 9305050

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<210> 346

<211> 25

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<223> Synthetic Oligonucleotide Probe

<400> 346

gggatgcagg tgggtgtctca tgggg 25

<210> 347

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 347

ccctcatgta ccggctcc 18

<210> 348

<211> 48

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 348

ggattctaatt acgactcact atagggctca gaaaagcgca acagagaa 48

<210> 349

<211> 47

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<400> 349

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<210> 350

<211> 48

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<210> 351  
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<400> 351  
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<210> 352  
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<400> 352  
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<210> 353  
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<400> 353  
ctatgaaatt aaccctcact aaagggacgg gggacaccac ggaccaga 48

<210> 354  
<211> 48  
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<400> 354  
ggattctaatac gactcact atagggcttg ctgcgggtttt tgttcctg 48

<210> 355  
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 <400> 355  
 ctatgaaatt aaccctcact aaagggagct gccgatccca ctggtatt 48  
  
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 <400> 356  
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 <210> 357  
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 <400> 357  
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<210> 360  
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<210> 363  
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<400> 364

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<210> 365

<211> 48

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<400> 365

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<210> 366

<211> 48

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 366

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<210> 367

<211> 47

<212> DNA

<213> Artificial Sequence

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<223> Synthetic Oligonucleotide Probe

<400> 367

ctatgaaatt aaccctcact aaaggacag acggggcaga gggagtg 47

<210> 368

<211> 47

<212> DNA

<213> Artificial Sequence

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<400> 368

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<210> 369

<211> 48

<212> DNA

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<400> 369

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<210> 370

<211> 48

<212> DNA

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<210> 371

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<400> 373

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<210> 374

<211> 47

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<211> 48

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ctatgaaatt aaccctcact aaagggatcc caggtgatga ggtccaga 48

<211> 997

<213> Homo Sapien

|             |             |             |             |             |     |
|-------------|-------------|-------------|-------------|-------------|-----|
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| aggggagggag | agaaaaagag  | agagagagaa  | acaaaaaacc  | aaagagagag  | 100 |
| aaaaaatgaa  | ttcatctaaa  | tcatctgaaa  | cacaatgcac  | agagagagga  | 150 |
| tgcttctctt  | cccaaagtgt  | cttatggact  | gttgctggga  | tccccatcct  | 200 |
| atttctcagt  | gcctgtttca  | tcaccagatg  | tgttgtgaca  | tttcgcatct  | 250 |
| ttcaaacctg  | tgatgagaaa  | aagtttcagc  | tacctgagaa  | tttcacagag  | 300 |
| ctctcctgct  | acaattatgg  | atcagggttca | gtcaagaatt  | gttgtccatt  | 350 |
| gaactgggaa  | tatttttcaat | ccagctgcta  | cttcttttct  | actgacacca  | 400 |
| tttcctgggc  | gttaagttta  | aagaactgct  | cagccatggg  | ggctcacctg  | 450 |
| gtggttatca  | actcacagga  | ggagcaggaa  | ttcctttcct  | acaagaaacc  | 500 |
| taaaatgaga  | gagtttttta  | ttggactgtc  | agaccagggt  | gtcgaagggtc | 550 |
| agtggcaatg  | ggtggacggc  | acacctttga  | caaagtctct  | gagcttctgg  | 600 |
| gatgtagggg  | agcccaacaa  | catagctacc  | ctggagggact | gtgccaccat  | 650 |
| gagagactct  | tcaaacccaa  | ggcaaaattg  | gaatgatgta  | acctgtttcc  | 700 |
| tcaattattt  | tcggatttgt  | gaaatggtag  | gaataaatcc  | tttgaacaaa  | 750 |





Thr Met Arg Asp Ser Ser Asn Pro Arg Gln Asn Trp Asn Asp Val  
                                   185                                  190                                  195

Thr Cys Phe Leu Asn Tyr Phe Arg Ile Cys Glu Met Val Gly Ile  
                                   200                                  205                                  210

Asn Pro Leu Asn Lys Gly Lys Ser Leu  
                                   215

<210> 378

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 378

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<210> 379

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic Oligonucleotide Probe

<400> 379

tattcctacc atttcacaaa tccg 24

<210> 380

<211> 49

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 380

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<210> 381

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 381

gcagattttg aggacagcca cctcca 26

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<210> 382
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<212> DNA
<213> Artificial Sequence

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<210> 383
<211> 21
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<220>
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<400> 383
    cagactgagg gagatccgag a 21

<210> 384
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<400> 384
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<400> 385
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<210> 389  
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<400> 389  
tgccagctgc atgctgccag tt 22

<210> 390  
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gccgctgtcc actgcag 17

<210> 392

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| Met | Ala | Leu | Arg | Arg | Pro | Pro | Arg | Leu | Arg | Leu | Cys | Ala | Arg | Leu | 1   | 5   | 10  | 15 |
| Pro | Asp | Phe | Phe | Leu | Leu | Leu | Leu | Phe | Arg | Gly | Cys | Leu | Ile | Gly | 20  | 25  | 30  |    |
| Ala | Val | Asn | Leu | Lys | Ser | Ser | Asn | Arg | Thr | Pro | Val | Val | Gln | Glu | 35  | 40  | 45  |    |
| Phe | Glu | Ser | Val | Glu | Leu | Ser | Cys | Ile | Ile | Thr | Asp | Ser | Gln | Thr | 50  | 55  | 60  |    |
| Ser | Asp | Pro | Arg | Ile | Glu | Trp | Lys | Lys | Ile | Gln | Asp | Glu | Gln | Thr | 65  | 70  | 75  |    |
| Thr | Tyr | Val | Phe | Phe | Asp | Asn | Lys | Ile | Gln | Gly | Asp | Leu | Ala | Gly | 80  | 85  | 90  |    |
| Arg | Ala | Glu | Ile | Leu | Gly | Lys | Thr | Ser | Leu | Lys | Ile | Trp | Asn | Val | 95  | 100 | 105 |    |
| Thr | Arg | Arg | Asp | Ser | Ala | Leu | Tyr | Arg | Cys | Glu | Val | Val | Ala | Arg | 110 | 115 | 120 |    |
| Asn | Asp | Arg | Lys | Glu | Ile | Asp | Glu | Ile | Val | Ile | Glu | Leu | Thr | Val | 125 | 130 | 135 |    |
| Gln | Val | Lys | Pro | Val | Thr | Pro | Val | Cys | Arg | Val | Pro | Lys | Ala | Val | 140 | 145 | 150 |    |
| Pro | Val | Gly | Lys | Met | Ala | Thr | Leu | His | Cys | Gln | Glu | Ser | Glu | Gly | 155 | 160 | 165 |    |
| His | Pro | Arg | Pro | His | Tyr | Ser | Trp | Tyr | Arg | Asn | Asp | Val | Pro | Leu | 170 | 175 | 180 |    |
| Pro | Thr | Asp | Ser | Arg | Ala | Asn | Pro | Arg | Phe | Arg | Asn | Ser | Ser | Phe | 185 | 190 | 195 |    |

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|     |     |     |     |     |     |     |     |     |     |     |     |     |     |     |
|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| His | Leu | Asn | Ser | Glu | Thr | Gly | Thr | Leu | Val | Phe | Thr | Ala | Val | His |
|     |     |     |     | 200 |     |     |     |     | 205 |     |     |     |     | 210 |
| Lys | Asp | Asp | Ser | Gly | Gln | Tyr | Tyr | Cys | Ile | Ala | Ser | Asn | Asp | Ala |
|     |     |     |     | 215 |     |     |     |     | 220 |     |     |     |     | 225 |
| Gly | Ser | Ala | Arg | Cys | Glu | Glu | Gln | Glu | Met | Glu | Val | Tyr | Asp | Leu |
|     |     |     |     | 230 |     |     |     |     | 235 |     |     |     |     | 240 |
| Asn | Ile | Gly | Gly | Ile | Ile | Gly | Gly | Val | Leu | Val | Val | Leu | Ala | Val |
|     |     |     |     | 245 |     |     |     |     | 250 |     |     |     |     | 255 |
| Leu | Ala | Leu | Ile | Thr | Leu | Gly | Ile | Cys | Cys | Ala | Tyr | Arg | Arg | Gly |
|     |     |     |     | 260 |     |     |     |     | 265 |     |     |     |     | 270 |
| Tyr | Phe | Ile | Asn | Asn | Lys | Gln | Asp | Gly | Glu | Ser | Tyr | Lys | Asn | Pro |
|     |     |     |     | 275 |     |     |     |     | 280 |     |     |     |     | 285 |
| Gly | Lys | Pro | Asp | Gly | Val | Asn | Tyr | Ile | Arg | Thr | Asp | Glu | Glu | Gly |
|     |     |     |     | 290 |     |     |     |     | 295 |     |     |     |     | 300 |
| Asp | Phe | Arg | His | Lys | Ser | Ser | Phe | Val | Ile |     |     |     |     |     |
|     |     |     |     | 305 |     |     |     |     | 310 |     |     |     |     |     |